Medical

TIMES

Chronic Ulcerative Colitis (refresher)

Palpable Abdominal "Masses"

Anemia in the Aged

Male Sterility

G-I and Biliary Tract Surgery

Superficial Cysts

Editorials

Contemporary Progress

News and Notes

Medical Book News

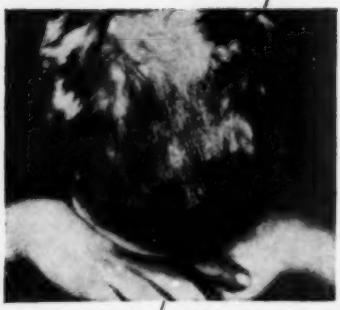
Letters to the Editor

Modern Medicinals

Modern Therapeutics

Contents Pages 5a, 7a

more effective against



tinea capitis

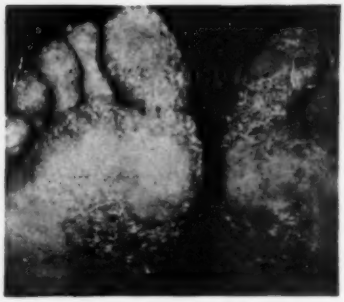
"More effective in ringworm of the scalp than any other topical agent."[1]

tinea pedis

In "athlete's foot" a combined cured and improved rate of 95% has been obtained.[1]

Also indicated in

tinea corporis
tinea cruris
tinea versicolor
tinea of the nails



"broad antifungal spectrum ...good cutaneous tolerance."[1]

New!

Asterol® *dihydrochloride*

5% tincture . . . ointment . . . powder . . . sprayed, applied with cotton or dusted on

'Roche'

1. Stritzler, C.; Fishman, I. M., and Laurens, S.: *Transactions New York Acad. Sc., 13*:81, Nov., 1950.

HOFFMANN-LA ROCHE INC • ROCHE PARK • NUTLEY 10 • NEW JERSEY

ASTEROL DIHYDROCHLORIDE 'ROCHE'—BRAND OF DIAMTHAZOLE DIHYDROCHLORIDE [2-DIMETHYLAMINO-6-(*p*-DIETHYLAMINO ETHOXY)-BENZOTHIAZOLE DIHYDROCHLORIDE]

functional **in a new way...**

Full-footed ACE Elastic Hosiery fulfills its essential function of supporting leg structures in a new, extremely effective manner. Its positive terminal anchorage at the toe enables the hosiery to be drawn on the leg under *vertical* as well as *circumferential* tension, producing a type of lift that can best be described as *"suspension support"*.

fashionable **in a new way...**

Full-footed ACE Elastic Hosiery is not only sheer and form-fitted, but it *requires no overhose!* Thus it eliminates the unattractive bulk, the uncomfortable weight, and the unsightly wrinkles that have made women rebel against wearing elastic stockings.

full-footed

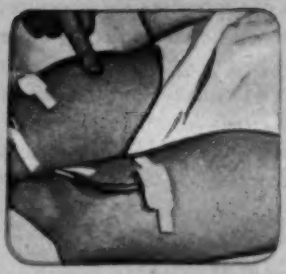
ACE® *Elastic Hosiery*

ACCEPTED COUNCIL ON PHYSICAL MEDICINE AND REHABILITATION AMERICAN MEDICAL ASSOCIATION

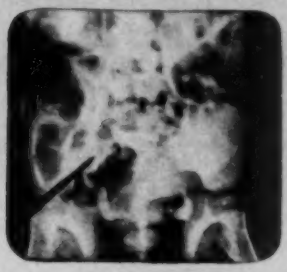
fashioned by the makers of ACE® Elastic Bandages

BECTON, DICKINSON AND COMPANY, RUTHERFORD, N. J.

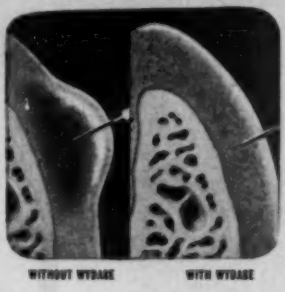
ACE, Trademark Reg. U. S. Pat. Off.



HYPODERMOCLYSIS
more efficient, less painful



CONTRAST MEDIA INJECTED HYPODERMALLY
affords quick, clear visualization



LOCAL ANESTHETIC
rapidly diffuses around nerve area; swelling is minimized

Wyeth®

BECAUSE IT BREAKS DOWN THE BARRIER

to diffusion of fluids, WYDASE facilitates hypodermoclysis, local anesthesia, and hypodermal injection of therapeutic agents.

LYOPHILIZED

WYDASE®

HYALURONIDASE WYETH

Wyeth Incorporated
Philadelphia 2, Pa.

CONTENTS

Medical Times is published monthly by Romaine Pierson Publishers, Inc., with publication offices at 34 North Crystal Street, East Stroudsburg, Pa. Executive, advertising and editorial offices at 676 Northern Boulevard, Great Neck, L. I., N. Y. Acceptance under section 34.64, P.L. and R., authorized February 23, 1950 at East Stroudsburg, Pa.

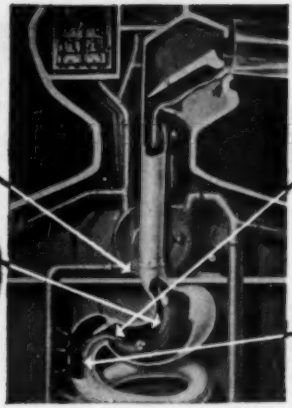
Give faster pain relief with BUFFERIN

ACTS TWICE AS FAST AS ASPIRIN

WITHOUT GASTRIC DISTRESS!

1. BUFFERIN enters the stomach here.

2. BUFFERIN exerts its antacid effect, lessening the possibility of gastric distress.



3. BUFFERIN helps dilate the pyloric valve, promptly leaves the stomach.

4. BUFFERIN's analgesic component is absorbed into the blood *twice as fast as aspirin*, relieves pain.

When you prescribe BUFFERIN to your patients you assure *faster relief of pain*. Clinical studies[1] show that within ten minutes after BUFFERIN is ingested, blood salicylate levels are as great as those attained by aspirin in twice this time. That is why BUFFERIN *acts twice as fast as aspirin*.

BUFFERIN has *greater gastric tolerance*. BUFFERIN's antacid ingredients provide protection against the gastric distress so often seen with aspirin.[1] BUFFERIN, therefore, is especially suited for use when prolonged use of salicylates is indicated.

1. Effect of Buffering Agents on Absorption of Acetylsalicylic Acid J. Am. Pharm. A., Sc. Ed. 39:21, Jan. 1950.

In vials of 12 and 36 and bottles of 100. Scored for divided dosage. Each BUFFERIN tablet contains 5 grains of acetylsalicylic acid with optimal proportions of magnesium carbonate and aluminum glycinate.

BUFFERIN
is a trade-mark of the Bristol-Myers Company

A product of BRISTOL-MYERS COMPANY
19 West 50 St., New York 20, N. Y.

CONTENTS

keep cardiacs at constant weight

Even mild latent edema adds a substantial burden to the failing heart. It is the best, therefore, to assure the edema-free state by maintaining the cardiac patient at unfluctuating basal weight with systematic mercurial diuresis.

Tablets MERCUHYDRIN with Ascorbic Acid—plus an occasional injection—are unexcelled for diuretic maintenance therapy. Because "maximum absorption occurs relatively high in the gastrointestinal tract (stomach and duodenum)"* these tablets are simple sugar-coated. Unlike poorly tolerated oral mercurials, they require no enteric coating.

Effective and well tolerated, Tablets MERCUHYDRIN with Ascorbic Acid are ideal for keeping ambulatory cardiacs consistently free of edema with a minimum of inconvenience to physician and patient.

tablets

MERCUHYDRIN®

with Ascorbic Acid

(brand of meralluride)

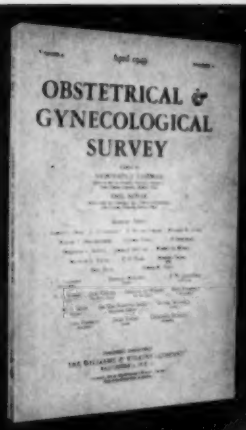
Available in bottles of 100 simple sugar-coated tablets each containing meralluride 40 mg. (equivalent to 19.5 mg. of mercury) and ascorbic acid 100 mg.

*Overmhn, W. J.; Gordon, W. H., and Burch, G. E.: Tracer Studies of the Urinary Excretion of Radioactive Mercury following administration of a Mercurial Diuretic, Circulation *1*:496, 1950.

The simplest method of outpatient maintenance

Lakeside Laboratories, INC., MILWAUKEE 1, WISCONSIN

MEDICAL BOOK NEWS



"... these statistics are the best that have been reported. In fact, they couldn't be any better."

Editor: Obstetrical & Gynecological Survey
Vol. 4, No. 2: April, 1949: page 190

[illegible] statistics referred [illegible] to are those reported by Dr. O. W. Smith in her article, "Diethylstilbestrol in the Prevention and Treatment of Complications of Pregnancy", in the November, 1948, issue of *The American Journal of Obstetrics and Gynecology*. This study of 632 pregnancies showed that, "under stilbestrol treatment the habitual aborter enjoys the same outlook for a living baby as does the average gravida. This is what I mean by saying that these statistics are the best that have been reported".[1]

This report affords additional evidence that the treatment of threatened and habitual abortions with **des** — Grant Process diethylstilbestrol — as pioneered by Karl John Karnaky[2], is the most effective treatment available.

The work of Silbernagel and Burt[3], and of Rosenblum and Melinkoff[4] showed that with diethylstilbestrol *68.4% more* cases were carried to term than with progesterone. In fact, it is now felt that the administration of progesterone may actually hasten abortion[5].

des is the only diethylstilbestrol prepared by the unique Grant Process of triple crystallization. Highly micronized **des** tablets are dissolved within a few seconds and are uniformly absorbed into the blood stream. **des** is specifically designed for the treatment of threatened abortion, habitual abortion and premature labor. The living results obtained with **des** are the best that have been reported. "In fact, they couldn't possibly be any better."

des IS BEST

REFERENCES
1. Editor: Obs. and Gyn. Survey. 56, 821-834, Nov. 1948. 2. Karnaky, K. J. Estrogenic Tolerance in Pregnant Women. Amer. Jr. Obs. and Gyn. 53, 313-316, 1947. 3. Silbernagel, W. M. and Burt, O. P. Ohio State Med. Jr. 38, 430 May 1942. 4. Rosenblum and Melinkoff. Preservation of the Threatened Pregnancy with Particular Reference to the Use of Diethylstilbestrol. West. Jr. Surg. Obs. and Gyn. 55, 598-603, Nov. 1947. 5. Hamblen, E. C. Endocrinology of Woman. Springfield, Ill. Charles E. Thomas, 1948, p. 476.

For further information, reprints and samples, write Medical Director.

Grant Chemical Company, Inc.

95 MADISON AVENUE, NEW YORK 16, NEW YORK

Medical TIMES

THE JOURNAL OF GENERAL PRACTICE

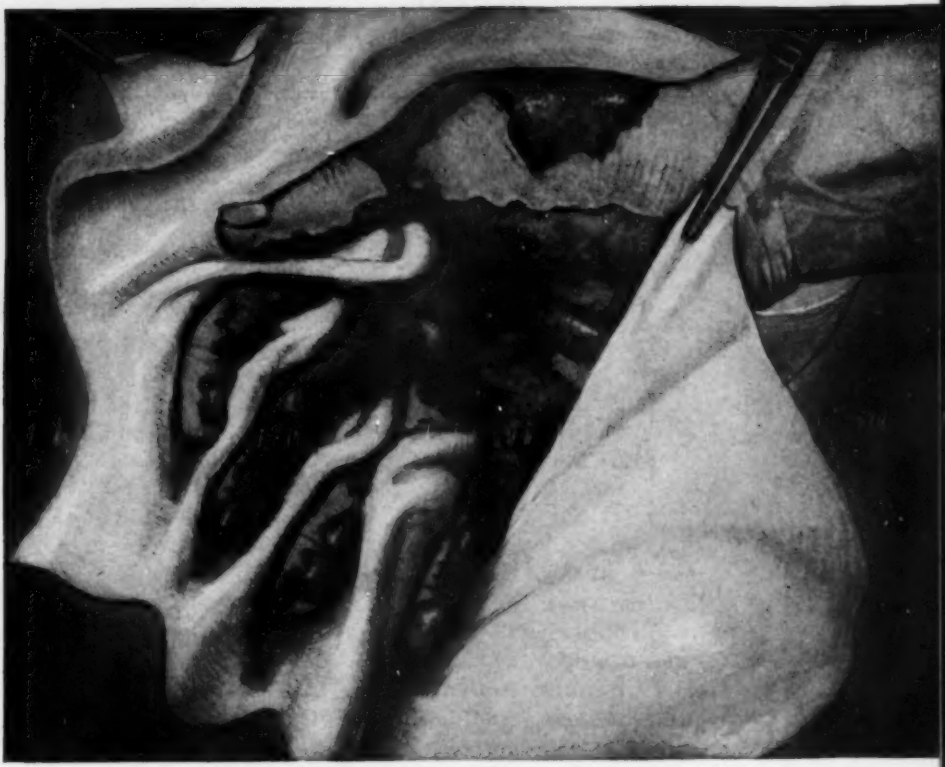
Incorporating the Long Island Medical Journal and Western Medical Times

CONTRIBUTIONS Exclusive Publication: Articles are accepted for publication with the understanding that they are contributed solely to this publication, are of practical value to the general practitioner and do not contain references to drugs, synthetic or otherwise, except under the following conditions: 1. The chemical and not the trade name must be used, provided that no obscurity results and scientific purpose is not badly served. 2. The substance must not stand disapproved in the American Medical Association's annual publication, New and Nonofficial Remedies. When possible, two copies of manuscript should be submitted. Drawings or photographs are especially desired and the publishers will have half tones or line cuts made without expense to the authors. Reprints will be supplied authors below cost.

Published at East Stroudsburg, Pa., with executive and editorial offices at 676 Northern Boulevard, Great Neck, L. I., N. Y. Book review and exchange department 1313 Bedford Ave., Brooklyn, N. Y. Subscription rate, $7.00 per year. Notify publisher promptly of change of address or if paper is not received regularly.

BOARD OF CONTRIBUTING EDITORS

new!



An important advance in wound therapy

Aureomycin Dressing of Davis & Geck is an entirely new dressing for wounds such as burns, skin graft donor sites, abrasions, ulcers, surgical incisions and wherever a non-adherent dressing with antibiotic action is indicated.

The prime objective in the treatment of wounds is early closure. Infection in wounds delays healing. Systemic administration of antibiotics may not reach localized infections. Aureomycin Dressing provides, where it is needed, a high local concentration of wide-spectrum aureomycin, effective against both Gram-positive and Gram-negative organisms.

Aureomycin DRESSING

Advantages:

1. *Broad-spectrum*—Aureomycin Dressing concentrates locally the antibiotic which is now recognized as the most versatile yet discovered, with a wider range of activity against both Gram-positive and Gram-negative organisms than any other known remedy.

2. *Prevents infection*—Water absorbent ointment releases aureomycin suppressing growth of susceptible organisms already present and controlling spread of possible subsequent contamination.

3. *Non-adherent and non-macerating*—Minimizes abrasion of healing wounds and avoids trapping of moisture conducive to bacterial growth.

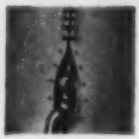
4. *Promotes healing*—It does not interfere with healing, as do many chemical antiseptics. Where infection is controlled, healing is faster.

5. *Non-toxic* — Reactions to Aureomycin Dressing have so far not been observed.

6. *Economical*—Shorter period of disability means a saving in expense and hospital time.

Aureomycin Dressing may be used wherever a non-adhering dressing with antibacterial action is indicated.

Also new Aureomycin Packing—



- To pack abscess cavities (breast, perirectal, suppurative adenitis) after incision and drainage.
- To keep infected or contaminated wounds open, until infection is under control (empyema, acute cholecystitis, local peritonitis, osteomyelitis, boils, paronychias, and traumatic wounds).
- For hemostasis.

In clinical trials a variety of infected lesions healed promptly after drainage and repeated packing. Traumatic wounds packed open with Aureomycin Packing remained free from infection and healed after delayed primary closure.

Packaging: *Aureomycin Dressing* is an 8" x 12" gauze dressing of close mesh impregnated with 16 Gms. of 2% aureomycin hydrochloride ointment. In each dressing there are 320 mg. of crystalline aureomycin hydrochloride.

Aureomycin Packing is double selvage-edge gauze, in ½" x 24" and 1" x 36" strips. Each gram of gauze is impregnated with 4 mg. of aureomycin in stable form.

Davis & Geck, Inc.

Surgeons agree on D & G

LETTERS TO THE EDITOR

This department is offered as an Open Forum for the discussion of topical medical issues. All letters must be signed. However, to protect the identity of writers, who are invited to comment on controversial subjects, names will be omitted when requested.

Endometriosis

"The other day I happened to pick up the May 1951 issue of MEDICAL TIMES. Being an Obstetrician and Gynecologist I immediately became absorbed in Endometriosis and found it the most comprehensive article on the subject that I have ever read. I enjoyed it immensely and would appreciate a reprint. I have a son practicing Obstetrics and Gynecology and I am sure he would also value a reprint if you could spare two.

"Thanking you in advance for this favor and wishing you great success with your excellent medical journal."

S. M. BUCH, M.D.
New York, N. Y.

Tops

"MEDICAL TIMES is tops for the G.P."

EDGAR PRICE, M.D.
Los Angeles, Calif.

ACTH and Cortisone

"I read the ACTH and Cortisone article in your September issue and, like all your summary articles, found it very informative."

J.F.M., M.D.
Flushing, N. Y.

A New Proven Coalition of Hemopoietic Factors..

STRIKES AT THE ENTIRE ANEMIA SYNDROME!

Hemopoietic efficiency is now known to be dependent on the interrelated actions of numerous factors—many heretofore unidentified with normal blood formation.

Iron, cobalt, zinc, copper, calcium, phosphorus and manganese all play important roles in blood regeneration. [1,2,3,4]

A new embracive anemia therapy—HEPTUNA PLUS—combines these recently recognized hemoglobin-forming factors with the most potent hemopoietic agents known—*Vitamin* B^{12} and *Folic Acid.*

In addition, the 11 minerals and 9 vitamins in HEPTUNA PLUS promote maximal enzyme efficiency, which is vital to blood formation, and correct the nutritional deficiencies which complicate the anemia syndrome.

1. Bio-Chem. Rev., 3/50, p. 11.
2. Monier-Williams, G. W.: Trace Elements in Food, 1949, p. 2.
3. Monier-Williams, G. W.: Trace-Elements in Food, 1949, pp. 107-108.
4. Wintrobe, M. W.: Clin. Hematology, 6/47, p. 97.

Heptuna plus

Available at all prescription pharmacies, supplied in bottles of 100 capsules

Each Capsule Contains:

Ferrous Sulfate U.S.P.	**4.5 gr.**	Cobalt	0.1 mg.
Vitamin B_{12}	**2 mcg.**	Copper	1 mg.
Folic Acid	**0.85 mg.**	Molybdenum	0.2 mg.
Vitamin A	5000 U.S.P. Units	Calcium	66 mg.
Vitamin D	500 U.S.P. Units	Iodine	0.05 mg.
Vitamin B_1	2 mg.	Manganese	0.033 mg.
Vitamin B_2	2 mg.	Magnesium	2 mg.
Vitamin B_6	0.1 mg.	Phosphorus	51 mg.
Niacinamide	10 mg.	Potassium	1.7 mg.
Calcium Pantothenate	0.33 mg.	Zinc	0.4 mg.

With other B-Complex Factors from Liver.

ROERIG Rx **J. B. ROERIG AND COMPANY,** 536 LAKE SHORE DRIVE, CHICAGO 11, ILL.

for "This wormy world"

Diphenan

209 MILLION persons act as hosts to Oxyuris (Enterobius) vermicularis according to Stoll's fascinating article "This Wormy World".[1] This undesirable tenancy can be terminated with the aid of 'Tabloid' brand Diphenan, by mouth, for Diphenan is an effective anthelmintic.

Since these worms make no distinction as to age or social status—Diphenan's palatability, safety and economy are important considerations. One quarter wafer t.i.d. for infants up to 18 months; ½ wafer t.i.d. for children up to 10; 1 t.i.d. for older children, and 1 or 2 t.i.d. for adults. 'Tabloid' brand Diphenan is supplied as wintergreen-flavored chewing wafers of 0.5 grams each in bottles of 20 and 100.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., TUCKAHOE 7, N. Y.

1. Stoll, Norman R.: Jnl. of Parasitology 23:1 No. 1 (Feb.) 1947.

Preceptin®

VAGINAL GEL

the simple method of contraception used without a diaphragm...

Physicians and patients have long been demanding a simpler contraceptive method than jelly *and* diaphragm.

built on a new base

To replace the function of the diaphragm, a new and better physical barrier, incorporated into the Gel itself, was needed — one that could be depended on to cover the cervical os effectively. The new base of PRECEPTIN, achieved by blending recently developed synthetic gel-forming agents, meets this requirement, making it possible to do away with the diaphragm.

clinically proved

Of 3270 patients using Preceptin Gel — 99.2 percent received complete protection.

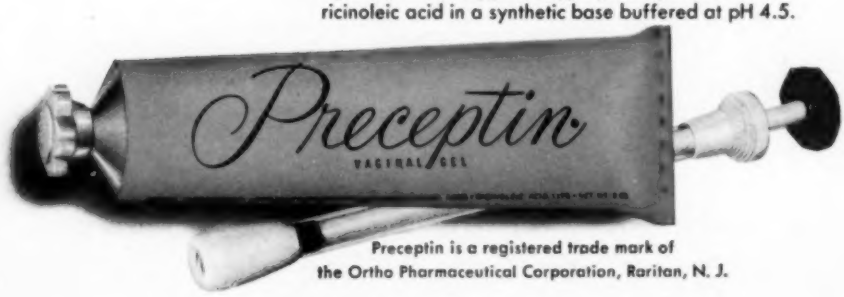
Preceptin's new base:

1. **adheres well to the moist cervical mucosa — forms a persistent, adherent physico-chemical barrier over the cervical os.**
2. **is more miscible with semen — means greater spermicidal potency.**
3. **rapidly releases active spermicides — enables Preceptin to kill sperm on contact.**

Preceptin Vaginal Gel

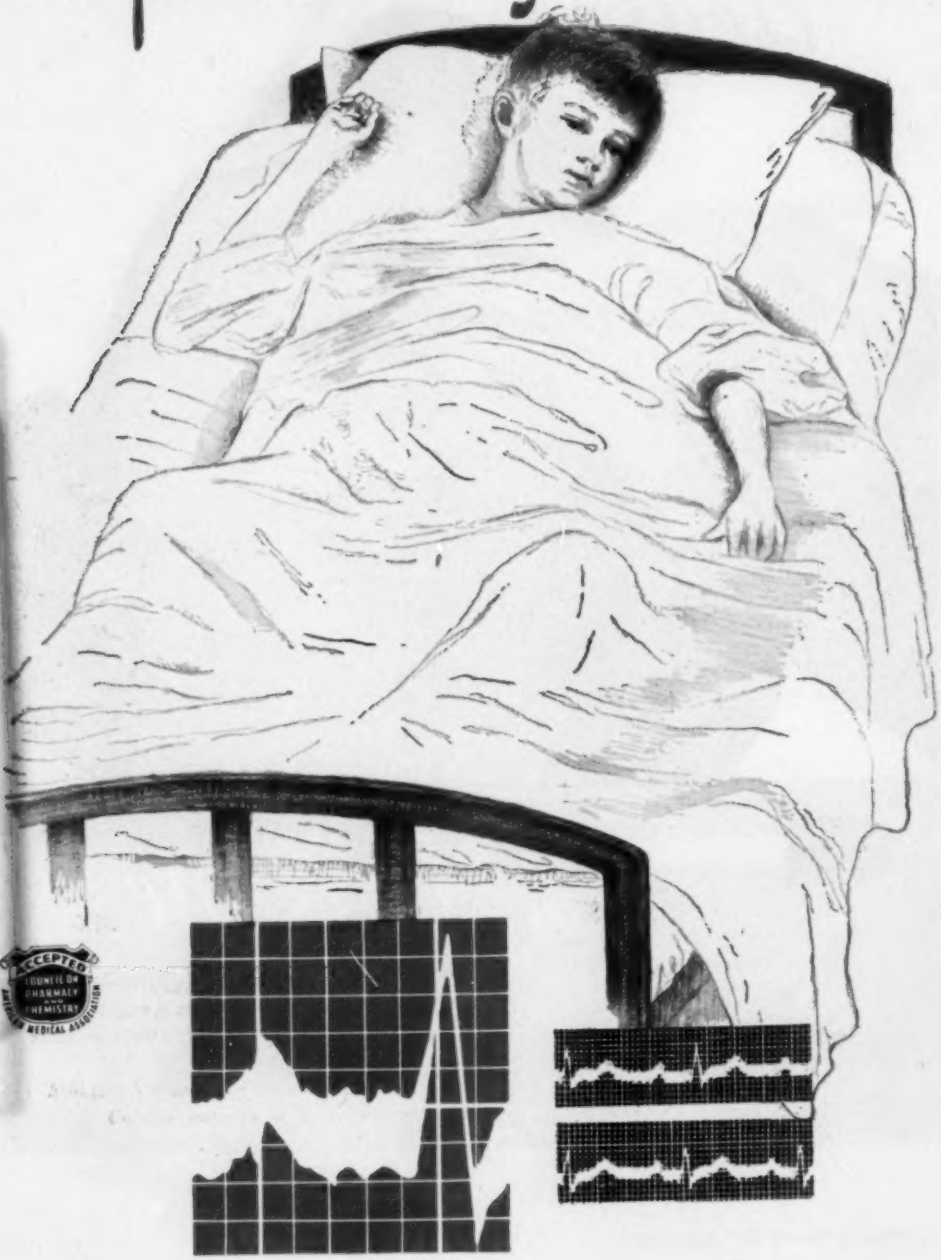
Used with measured-dose applicator.

COMPOSITION: PRECEPTIN contains the active spermicidal agents p-Diisobutylphenoxypolyethoxyethanol and ricinoleic acid in a synthetic base buffered at pH 4.5.



Preceptin is a registered trade mark of the Ortho Pharmaceutical Corporation, Raritan, N. J.

a promising outlook



ACCEPTED
COUNCIL ON PHARMACY AND CHEMISTRY
AMERICAN MEDICAL ASSOCIATION

in acute rheumatic fever

ACTHAR, instituted early and in adequate dosage, gives promise of lasting results in rheumatic fever.

ACTHAR, in an increasing number of rheumatic fever patients, has shortened the course of the disease, minimized residual cardiac damage and probably reduced mortality. Systemic signs and symptoms of rheumatic fever usually disappeared within three days—the acute rheumatic process was brought under control, and the electrocardiogram and enlarged heart returned to normal, with regression of pathologic murmurs. Marked cardiac failure, however, necessitates special caution, since sodium and water retention may be produced.

ACTHAR is available in vials of 10, 15, 25 and 40 U.S.P. Provisional Units. One milligram of the Armour Standard for ACTHAR is now accepted as the International Unit; the biologic potency of one International Unit is equal to the biologic potency of one U.S.P. Provisional Unit.

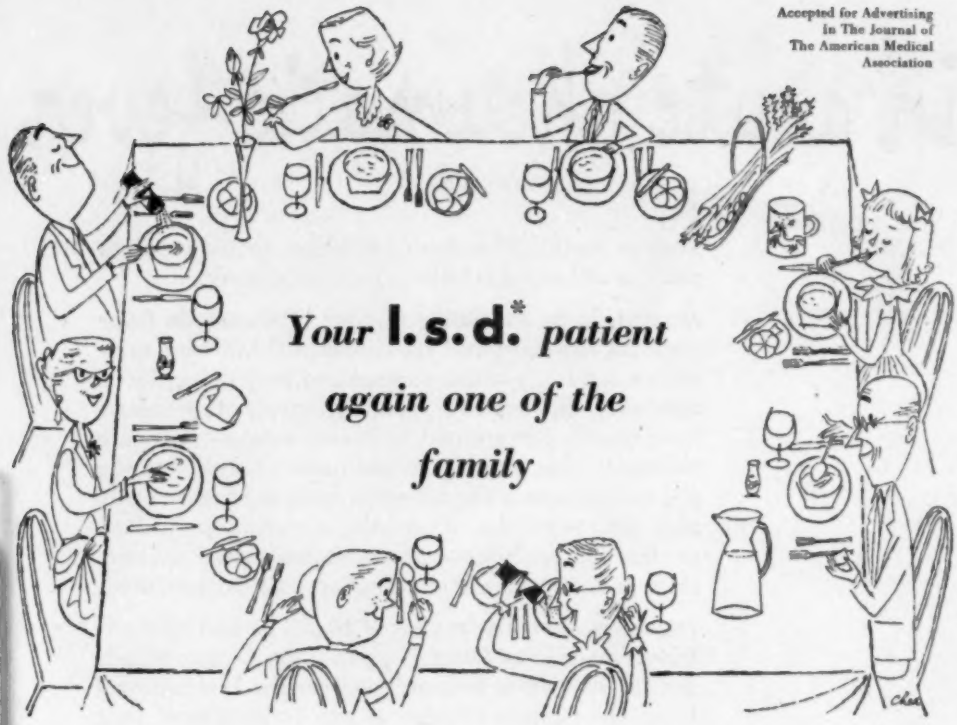
ACTHAR

THE ARMOUR LABORATORIES

CHICAGO 11, ILLINOIS

world-wide dependability

PHYSIOLOGIC THERAPEUTICS THROUGH BIORESEARCH



With Diasal, the **low sodium diet*** patient can once again enjoy his meals. Diasal is used just like salt...it tastes, looks and pours like salt; it contains only recognized ingredients and is safe for prolonged use; it may be used like salt at the table and in *cooking*. No wonder Diasal meets the basic requirements of a good salt substitute,[1] and besides keeps salt-restricted patients happy on low-sodium diets.

Diasal contains no ammonium, lithium or sodium. It is a simple formulation of potassium chloride, glutamic acid, and inert excipients. Because a depleted potassium state may occur in patients on a low-sodium diet,[2] Diasal may provide an efficient, convenient and safe means of supplying potassium in prophylactic amounts to the depleted diet. Diasal is contra-indicated only in severe renal disorders and oliguria. Diasal is available in 2 oz. shakers and 8 oz. bottles.

1. Rimmerman, A.B., and Halpern, A.: A comparative study of sodium-free salt substitutes. Am. Pract. & Dig. Treatment 2:168 (February) 1951.
2. Fremont, R.E.; Rimmerman, A.B., and Shaftel, H.E.: The occurrence and management of the low potassium state with patients on the low sodium diet. Postgraduate Med. 9:—(September) 1951.

for new zest in salt-restricted diets

DIASAL®

For samples and low-sodium diet sheets write

E. FOUGERA & Company, Inc. • 75 Varick Street, New York 13, N. Y.

"Doctor, there's nothing quite like natural milk for babies!"

ACCEPTED
COUNCIL ON FOODS AND NUTRITION
AMERICAN MEDICAL ASSOCIATION

Available in unlimited quantities in 14-ounce enamel-lined, vacuum-packed cans. Uniformity and sterility guaranteed.

When a change from cow's milk in baby's formula is indicated, prescribe the time-honored, *natural* substitute...MEYENBERG® Evaporated Goat Milk.

So many synthetic products are offered today, we feel the following statement is important and deserves your attention:

"Milk is the first food of infants, and one for which there is no fully satisfactory substitute. It is the only substance prepared by nature specifically as a food, and therefore is the one most likely to contain all the food elements necessary to life and growth."

S. G. Hicks, Hygeia, 26:174:48

For further information write

Jackson-Mitchell Pharmaceuticals, Inc.
SPECIAL MILK PRODUCTS, Inc.
PRODUCTS

LOS ANGELES 64, CALIFORNIA • SINCE 1934

When the diagnosis is Pyelitis

First: consider

to establish and maintain urinary antisepsis...

To establish and maintain urinary antisepsis, MANDELAMINE* is many times preferred because it is quickly effective against the organisms most commonly encountered in urinary-tract infections. Its exceptional freedom from untoward reactions and its wide range of antibacterial activity commend it for use as soon as the diagnosis has been made.

Urinary antisepsis is often achieved in uncomplicated pyelitis in as few as three days. Speedy recovery is thus secured in many cases without necessitating higher-cost therapy.

Other indications for MANDELAMINE are cystitis, prostatitis, pyelonephritis, nonspecific urethritis, and infections associated with urinary calculi or neurogenic bladder; also valuable for pre- and postoperative prophylaxis in urologic surgery.

Renal insufficiency is the only major contraindication to MANDELAMINE therapy.

MANDELAMINE is available in bottles of 120, 500, and 1,000 enteric-coated tablets, through all prescription pharmacies. Comprehensive literature and samples for clinical trial will be furnished to physicians on request.

NEPERA CHEMICAL CO., INC.
Pharmaceutical Manufacturers
NEPERA PARK, YONKERS 2, N. Y.

*MANDELAMINE is the registered trademark of Nepera Chemical Co., Inc., for its brand of methenamine mandelate.

superior decongestion—

no excitation...no wakefulness

Clinically proved Benzedrex Inhaler provides remarkably rapid, complete and prolonged shrinkage of the nasal mucosa. Its volatile form helps it open ducts and ostia which are frequently inaccessible to liquid forms of nasal medication.

Moreover, Benzedrex Inhaler may be freely used even by those individuals in whom such ephedrine-like effects as insomnia, restlessness, or nervousness are frequently encountered.

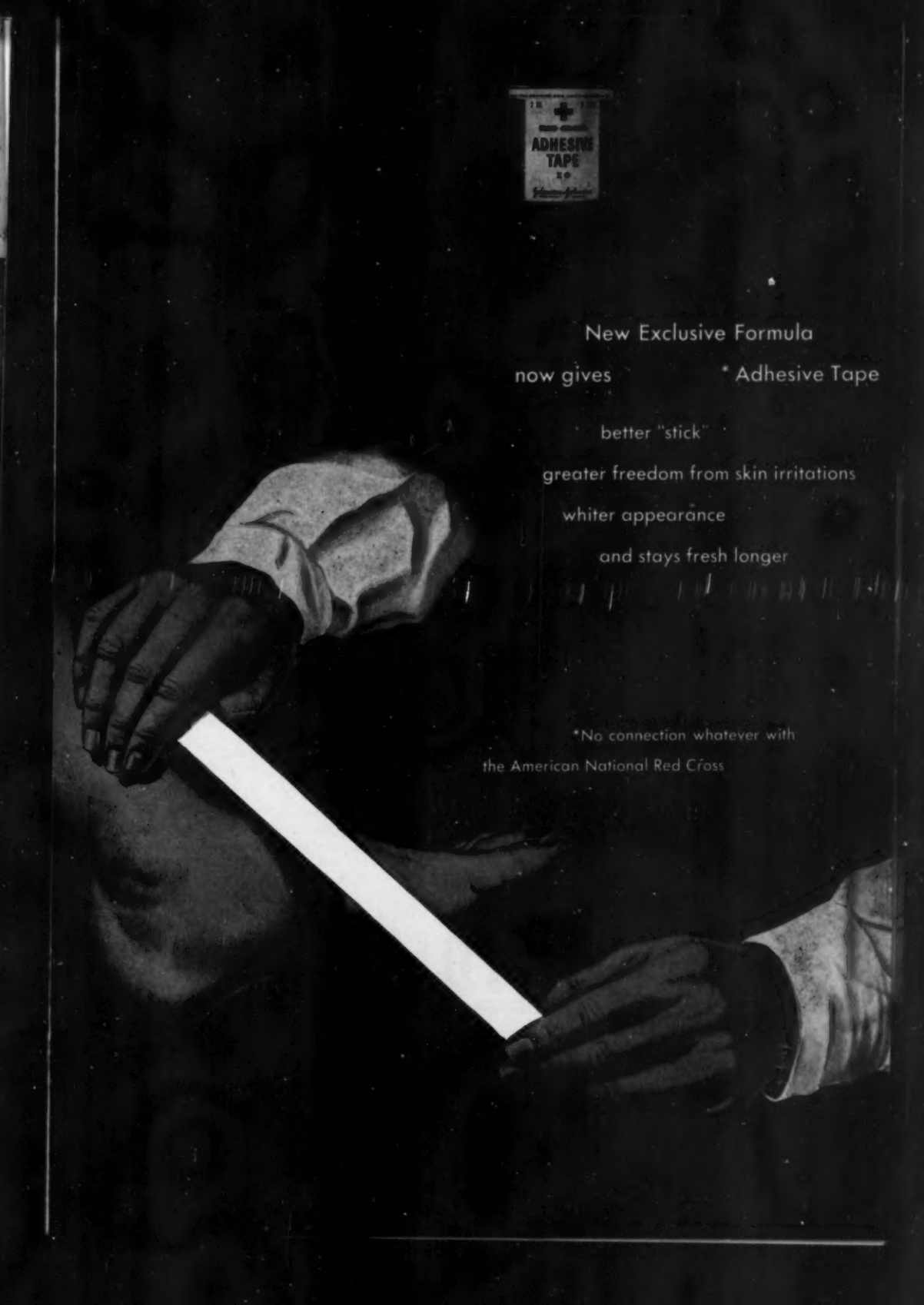
For use between treatments in your office, suggest this superior Inhaler to your next patient with nasal congestion.

Smith, Kline & French Laboratories
Philadelphia

Benzedrex* Inhaler

the best inhaler ever developed

*T.M. Reg. U.S. Pat. Off.


ADHESIVE
TAPE
New Exclusive Formula
now gives * Adhesive Tape
better "stick"
greater freedom from skin irritations
whiter appearance
and stays fresh longer
*No connection whatever with
the American National Red Cross

In a matter of minutes...

GRATIFYING RELIEF

with PYRIDIUM®

from the distressing symptoms of pain, burning, urgency and frequency which accompany UROGENITAL INFECTIONS.

Pyridium may be administered together with antibiotics, the sulfonamides, or other specific therapy to provide the dual approach of symptomatic relief and anti-infective action.

SUPPLY:

FOR ORAL USE—
Bottles containing 50 and tubes containing 12—0.1 Gm. (1½ grains) tablets.

FOR LOCAL USE—
Bottles containing 100 cc. of a 1% Solution (may be diluted, if necessary). Solution also may be used to prepare suitable dilutions for infants and young children, for peroral use.

PYRIDIUM®

(Brand of Phenylazo-diamino-pyridine HCl)

Pyridium is the trade-mark of Nepera Chemical Co., Inc., successor to Pyridium Corporation, for its brand of phenylazo-diamino-pyridine HCl. Merck & Co., Inc. sole distributor in the United States.

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY
In Canada: MERCK & CO. Limited—Montreal

A NEWCOMER . . .

for the smartly appointed office or clinic

Featuring a spacious double cabinet construction with utility drawer for storage of instruments and supplies, this compact, convenient equipment offers an ideal means of centralizing an office Sterile Supply. The unit further provides an adequate working surface for the collection of used instruments or preparation of the sterile instrument tray. Identified as MODEL DB, *a newcomer to the line of*

American Small Instrument Sterilizers

As with single compartment models, the unit is equipped with a superior "American" Small Instrument Sterilizing Unit, exclusively featuring "Burn-out-proof" safety. A concealed cover-elevating mechanism permits cabinet to be placed flush against the wall. Note the concealed pedal which eliminates tripping and allows greater freedom of access for the operator.

MODEL DB is available in White, Cream-white, Neptune green, Jade green, Ivory-tan and Black. Exterior dimensions are 33¾" wide, 13" deep and 35" high.

ALSO AVAILABLE: 14" and 16" units in Portable and Single Cabinet models. A selection of beautifully finished alternate cabinet designs subject to availability.

WRITE TODAY for complete information

AMERICAN STERILIZER COMPANY
Erie, Pennsylvania

DESIGNERS AND MANUFACTURERS OF SURGICAL STERILIZERS, TABLES AND LIGHTS

new form of gerentotherapy

NEW CHOLI-VASCUALS represents a formula* primarily to relieve a symptom complex found most commonly in the older patient (40 or over). **CHOLI-VASCUALS** is indicated both prophylactically and therapeutically in the treatment of arteriosclerosis, diabetes and obesity, cirrhosis, pancreatitis and kidney dysfunction.

Each gelucap contains:

Thiamine (B_1)	10 mg.
Vitamin B_6	3 mg.
Ascorbic Acid	30 mg.
Choline-Methionine Tartrate	200 mg.
Inositol	150 mg.
Vitamin B_{12}	5 mcg.
Alpha Tocopherol	50 mg.

Dowd, George; Rehabilitation of the Arteriosclerotic Worker: Medical Times, June 1951.
Morrison, L. M.; J. A. M. A., April 21, 1951.

Choli-Vascuals™

* Result of more than two years clinical and laboratory study—
Send for professional samples, literature and clinical reprint!

VITAMIN CORPORATION OF AMERICA, Division of VCA Laboratories, **NEWARK 5, N. J.**

World-wide **USE**
World-wide **ACCLAIM**

Chloromycetin®

CHLOROMYCETIN's world-wide reputation stems from its ability to produce rapid clinical response in a wide variety of infectious diseases—bacterial, viral and rickettsial. Numerous reports and the experience of daily practice confirm its

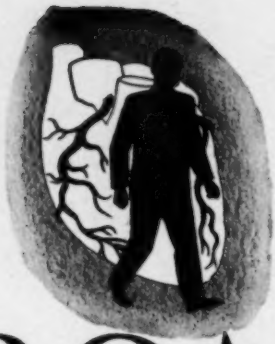
clinical efficacy • high tolerance
wide spectrum • high blood levels

CHLOROMYCETIN, a pure crystalline compound of definite molecular structure, is the only antibiotic produced on a practical scale by chemical synthesis. This unique feature means unvarying composition for dependable therapeutic results, freedom from extraneous material, and infrequent side effects.

CHLOROMYCETIN (Chloramphenicol, Parke-Davis) is supplied in Kapseals® of 250 mg., and in capsules of 50 and 100 mg.

PARKE, DAVIS & COMPANY

MEDICAMENTA VERA



a most significant advance

TROMEXAN T. M.

ethyl acetate

new, safer, oral anticoagulant

Throughout the exhaustive studies on TROMEXAN, involving many hundreds of cases, this new anticoagulant has proved singularly free from the dangers of hemorrhagic complication. Other advantageous clinical features of TROMEXAN are:

1 ***more rapid therapeutic response***
(therapeutic prothrombin level in 18-24 hours);

2 ***smooth, even maintenance of prothrombin level***
within therapeutic limits;

3 ***more rapid return to normal***
(24-48 hours) after cessation of administration.

In medical and surgical practice . . . as a prophylactic as well as a therapeutic agent . . . TROMEXAN extends the scope of anticoagulant treatment by reducing its hazards.

Detailed Brochure Sent on Request.

TROMEXAN (brand of ethyl biscoumacetate): available as uncoated scored tablets, 300 mg., bottles of 50 and 250.

Geigy

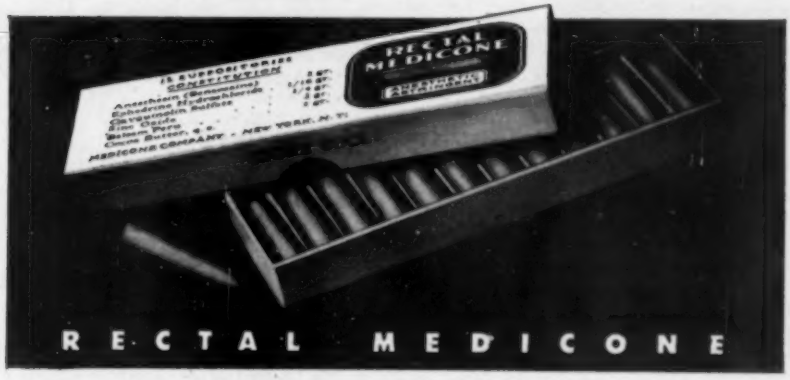
GEIGY PHARMACEUTICALS • Division of Geigy Company, Inc.
220 Church St., New York 13, N.Y.

Clinical success in postpartum hemorrhoids

From a clinical report of 79 cases of postpartum hemorrhoids, treated with RECTAL MEDICONE at a large New York institution, the following results were tabulated:

NO. OF CASES	TYPE	RESULTS
41	SUBACUTE	38 SATISFACTORY RESPONSE
22	ACUTE	22 RELIEF IN ALL CASES
16	CHRONIC	10 SATISFACTORY RESPONSE *(4 of the 16 cases required surgery)*

The explanation for these highly favorable results in this painful condition lies in the fact that RECTAL MEDICONE SUPPOSITORIES contain benzocaine for topical anesthesia – reinforced by other effective anti-hemorrhoidal agents, which promote retrogression and healing.



MODERN MEDICINALS

These brief resumes of essential information on the newer medicinals, which are not yet listed in the various reference books, can be pasted on file cards and a record kept. This file can be kept by the physician for ready reference.

Nephenalin

Manufacturer: Thos. Leeming & Co., Inc., New York 17, N. Y.

Indications: In asthma therapy, relieves patient at once (90 seconds), and it relays and extends this relief 4 hours, all in a single tablet.

Active Constituents: N-Isopropyl arterenol, 10mg.; Theophylline, 2 grs.; Ephedrine sulfate, 3/8 gr.; Phenobarbital, 1/8 gr.

Dosage: As indicated.

How Supplied: Bottles of 20, 100 and 1,000 tablets.

Prenderol

Manufacturer: E. R. Squibb & Sons, Inc., New York 22, N. Y.

Indications: A muscle relaxant, useful in certain neurologic disorders where abnormal neuromuscular states exist. Rigidity and spasticity may be significantly reduced and the patient made more comfortable and functionally aided. Improvement may be brought about in certain patients with hemiplegia, paraplegia, diplegia, cerebral palsy, multiple sclerosis, and brain and cord injuries.

Active Constituents: Squibb 2, 2-diethyl-1, 3-propanediol.

Dosage: Optimal dosage level is 80 to 110 mg./lb./day. This dosage is best given in divided doses 5 to 6 times daily. Administration for periods of time longer than two months is NOT recommended.

How Supplied: In 0.5 Gm. tablets; bottles of 100 and 1,000.

Tensilon Chloride

Manufacturer: Hoffmann-LaRoche, Inc., Nutley 10, N. J.

Indications: A curare antagonist, useful whenever the action of curare needs to be terminated or to counteract overdosage. It is particularly valuable in abdominal and pelvic surgery, in endoscopy, in shock therapy and in patients whose muscle spasm is treated with curare.

Active Constituents: (3-hydroxy-phenyl) dimethylethyl ammonium chloride.

Dosage: Doses of 10 mg. (1 cc.) by intravenous injection. This dosage may be repeated whenever necessary. Tensilon should NOT be given prior to the administration of curare.

How Supplied: In 10 cc. multiple-dose vials, 10 mg. per cc.

ADDITIONAL NEW PRODUCTS

Space for the full listing of the following new products, new dosage forms, change in formula, etc., is not available in this issue. Essential information is given and if the physician will keep this alphabetical arrangement with his other new medicinal listings, he will have a comprehensive file of all those new products which have not yet appeared in the various catalogs.

Almora Tablets, S. F. Durst & Co., Inc., Philadelphia 20, Pa. In the treatment of dysmenorrhea and eclampsia. **Dose:** As indicated. **Sup.:** In bottles of 50 tabs.

Abbocillin 800M Abbott Labs., North Chicago, Ill. In mild to moderate infections caused by penicillin-susceptible organisms. **Dose:** In 1 cc. doses at 48-hour intervals. **Sup.:** In 1 cc. and 5 cc. vials, singly and in boxes of 5.

Chloromycetin Cream Parke, Davis & Co., Detroit 32, Michigan. In superficial infections and dermatological conditions. **Dose:** Applied topically as indicated. **Sup.:** In 1 oz. tubes.

—Concluded on page 46a

BELIEVE IN YOURSELF!

Doctor, you probably have read a great deal of cigarette advertising with all sorts of claims.

So we suggest: make this simple test . . .

Take a PHILIP MORRIS—and *any* other cigarette. Then,

1. Light up either one. Take a puff — don't inhale — and s-l-o-w-l-y let the smoke come through your nose.

2. Now do exactly the same thing with the other cigarette.

Notice that PHILIP MORRIS is definitely less irritating, definitely milder.

Then, Doctor, ***BELIEVE IN YOURSELF!***

PHILIP MORRIS

Philip Morris & Co. Ltd., Inc.
100 Park Avenue, New York 17, N. Y.

TIME FOR *Thantis* LOZENGES

For throat irritations 'Thantis'* Lozenges provide effective relief. 'Thantis' Lozenges are especially beneficial in soothing these conditions because they are both antiseptic and anesthetic for mucous membranes of the throat and mouth. These effects are due to the two active medicinal agents, 'Merodicein'* an antiseptic of low toxicity, and Saligenin, a mild local anesthetic. When 'Thantis' Lozenges are dissolved in the mouth, the two ingredients dissolve slowly, providing prolonged medication of the throat.

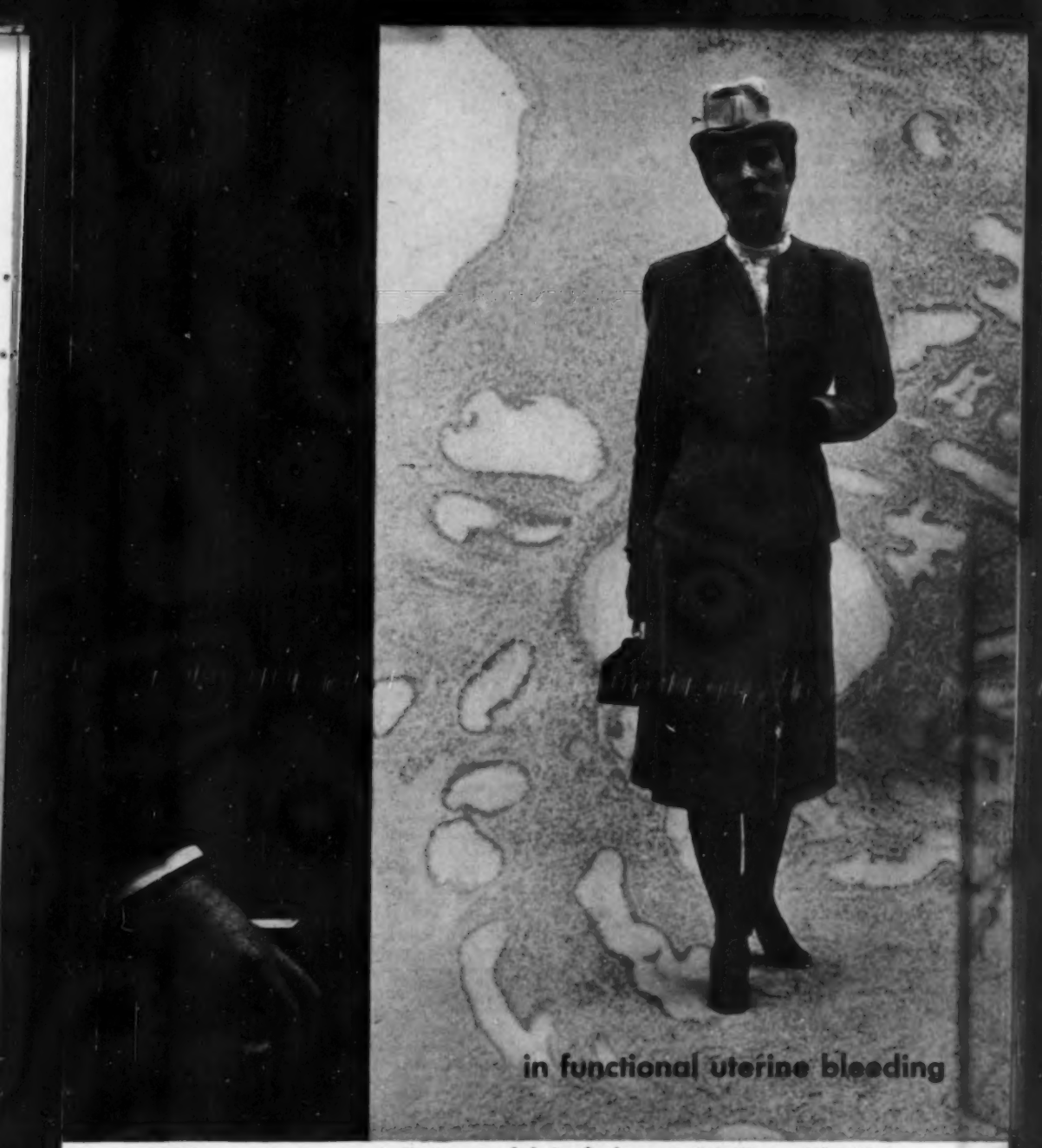
Each lozenge contains 'Merodicein' (H. W. & D. brand of monohydroxymercuridiiodoresorcinsulfonphthalein-sodium) 1/8 grain, Saligenin (orthohydroxybenzyl-alcohol, H. W. & D.) 1 grain.

Supplied in vials of 12 lozenges in individual cartons packed in dozens.

*Reg. U. S. Pat. Off.

HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND



An "estrogen of choice for hemostasis is 'Premarin'..."*

"PREMARIN."

Estrogenic Substances (water-soluble)
also known as Conjugated Estrogens (equine)
Tablets and Liquid

Highly Effective · Well Tolerated · Naturally Occurring · Orally Active

Ayerst, McKenna & Harrison Limited · 22 East 40th Street, New York 16, N. Y.

*Fry, C. O.: J. Am. M. Women's A. 4:51 (Feb.) 1949

5102

Let's take a careful look at the Male Climacteric and Male Senility

Many of the organic and psychic symptoms of the Male Climacteric may be overlooked because they are seldom severe or are attributed to other causes. Among the important signs are fatigue, asthenia, malaise, nervousness, depression, irritability and impotence. Werner[1] lists 37 symptoms of the male climacteric syndrome . . . most of them liable to treatment with

Glukor *a Fortified Gonadotropin*

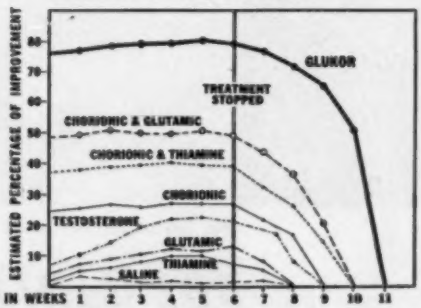
Glukor contains gonadotropin and therefore represents stimulation rather than replacement therapy.[2] It is more rapidly effective than testosterone,—non toxic and stable. *Glukor* has been clinically evaluated in a large series of cases: *Glukor* relieved all the major symptoms and restored the patients' mental and physical well-being.[3]

Glukor has used in a series of 237 cases of Male Senility. Dramatic and spectacular clinical results, equal in intensity to the anti-arthritic results attributed to cortisone, were observed.[4]

Chart clearly demonstrates the rapidity and therapeutic efficacy of *GLUKOR*. *GLUKOR achieved clinical results 3 times more effectively and 10 times as rapidly as testosterone.*

GLUKOR — Each cc contains:
Chorionic gonadotropin **200 I. U.**, Thiamin HCl **25 mg.**, Glutamic acid **52.5 p.p.m.**

Supplied: 25 cc. ampule vials



Relation of treatment with GLUKOR to its various components, testosterone and normal saline. 120 cases (not concurrent) of male climacteric divided into 3 groups of 15 each. Note the superiority of GLUKOR over testosterone.

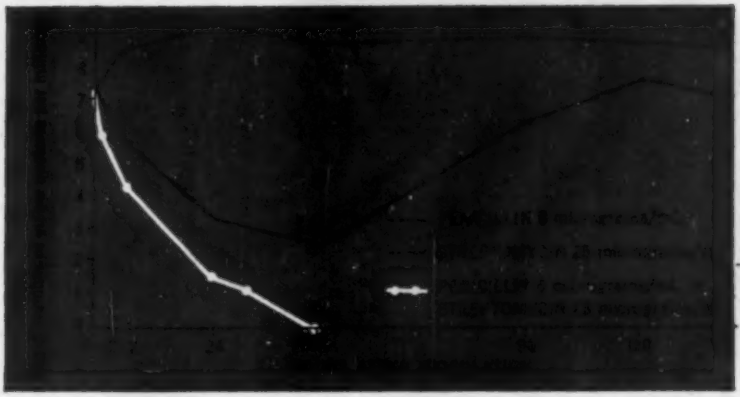
REFERENCES:

1. Werner, A. A.: The Male Climacteric, J. A. M. A., 112:144 (April 15) 1939. 705:709 (March 24) 1945. 188-194 (September 28) 1946.
2. Thompson, W. O.: Uses and Abuses of The Male Sex Hormone, J. A. M. A., 105-188 (Sept. 28) 1946.
3. Gould, W. L.: The Male Climacteric, Med. Times 79:3 (March) 1951.
4. Gould, W. L.: Male Senility, Med. Times 79:10 (Oct.) 1951.

Reprint and professional literature available by writing to:

AMHERST RESEARCH DIVISION
RESEARCH SUPPLIES
T Capitol Station — Albany, N. Y.

"true synergism" in an antibiotic combination



Potentiation of penicillin action by addition of streptomycin: in vitro effect on enterococci

Adapted from Jawetz, E.; Gunnison, J. B., and Coleman, V. R.: Science 111:254 (March 10) 1950.

in vitro: "The combined effect of streptomycin and penicillin on enterococci is evidently more than a summation of the individual drug effects... the increased effect... must be a true synergism of the two drugs."[1]

in therapy: "From the results obtained [in 8 cases of subacute enterococcic endocarditis] there can be little doubt that the concurrent administration of penicillin and streptomycin provides highly effective therapy. Moreover the results are obtained without... using massive doses of penicillin..."[2]

In each single dose vial

Combiotic* P-S

Penicillin and dihydroStreptomycin

provides for intramuscular injection, the synergistic action of:

crystalline procaine penicillin G ..... 300,000 units
buffered crystalline sodium penicillin G ... 100,000 units
dihydrostreptomycin (as the sulfate) ..... 1 Gm.
for one 3 cc. aqueous injection, easily prepared by the addition of sterile aqueous diluent.

Combiotic P-S is supplied in a special silicone treated "drain-clear" vial.

1. Jawetz, E.; Gunnison, J. B., and Coleman, V. R.: Science *111*:254 (March 10) 1950.
2. Tompsett, R., and McDermott, W.: Am. J. Med. 7:371 (Sept.) 1949.

*Trademark

ANTIBIOTIC DIVISION **Pfizer** CHAS. PFIZER & CO., INC., *Brooklyn 6, N. Y.*

AT THE FIRST SNEEZE

That's the sign for SYNTHENATE TARTRATE therapy ... for, in the early phase of coryza, this simple treatment brings gratifying, often dramatic relief.

In 65% of cases complete remission of symptoms occurs within fifteen minutes after injection of 1 cc of SYNTHENATE TARTRATE-Breon, when administered within twenty-four hours of the first sign of a cold!

Injection is simple... relatively nontoxic... prolonged in effect. SYNTHENATE TARTRATE-Breon increases cardiac efficiency and frequently slows the pulse rate; thus it is effective without appreciably increasing the work of the heart. It does not cause cardiac arrhythmias, does not stimulate the central nervous system, does not produce signs of anxiety.

DOSAGE: 1 cc injected intramuscularly or subcutaneously ... repeated in 3 or 4 hours, if required.

SYNTHENATE

Trademark

TARTRATE SOLUTION

Available at all drug stores. 1 cc ampuls — boxes of 12 and 25.
Complete literature to physicians on request.

BREON

George A. Breon & Co.

Pharmaceutical Chemists • 1450 Broadway, New York 18, N.Y.

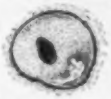
POTENT PROTECTION

> > > against the combined threats of arteriosclerosis and capillary fragility

the arteriosclerotic patient, victim of poor dietary habits and the tempo of modern life

the diabetic-hypertensive patient, often manifesting excessive capillary fragility

the coronary thrombosis patient, continually threatened by vascular accidents



section of thrombotic artery showing fibrous thickening of intima and atheromatous area

capillary fragility shown by high petechial count

Intimal capillary hemorrhages of the aorta may be precursors of more critical thrombi

VASCUTUM

TRADEMARK

for the life that begins at forty

VASCUTUM* makes possible a dual attack, both prophylactic and therapeutic, in the two-front battle against hypercholesterolemia and capillary fragility, combining in one medication:

1 Potent amounts of lipotropic agents, to promote decholesterolization in atherosclerosis, liver cirrhosis and diabetes mellitus.

2 Therapeutic amounts of rutin and ascorbic acid, to combat related capillary weakness effectively. Damaging retinal hemorrhage often results from excessive capillary fragility and associated abnormal cholesterol deposits.

The average daily dose (6 tablets) provides:

Choline	1 Gm.	Pyridoxine HCl	4 mg.
Inositol	1 Gm.	Rutin	150 mg.
dl-Methionine	500 mg.	Ascorbic Acid	75 mg.

VASCUTUM marks a distinct advance in the management of interrelated degenerative diseases affecting the middle-aged and elderly.

SUPPLIED in bottles containing 100 tablets.

SCHENLEY LABORATORIES, INC.
350 FIFTH AVENUE • NEW YORK 1

*The word VASCUTUM is a trademark of Schenley Laboratories, Inc.

now available...

a new product of
M & R Laboratories

SIMILAC *Liquid*

unexcelled convenience

...to prescribe

the doctor need only specify the proportion of water — SIMILAC Liquid diluted 1 to 1 provides normal 20 cal./oz. feeding formula

...to prepare

the mother simply mixes SIMILAC Liquid with the prescribed amount of previously boiled water and prepares "bottles without bother"

unexcelled nutritional advantages

curd tension of zero, fostering ease of digestion

50 mg. ascorbic acid per quart of formula

full, balanced array of essential amino acids

fats chosen for maximum retention and a high ratio of essential fatty acids

carbohydrate in the form of lactose (as in breast milk)

minerals and vitamins in optimum proportions

A QUARTER-CENTURY OF PROGRESS IN INFANT NUTRITION

M & R LABORATORIES • *Columbus 16, Ohio*

7½ gr.

7½ gr. (0.5 Gm.) *BLUE* CAPSULES CHLORAL HYDRATE – *Fellows*

• DESIRABLE SLEEP

lasting from five to eight hours, usually free from undesirable after-effects. Pulse and respiration are slowed in the same manner as in normal sleep. Reflexes are not abolished and the patient can be readily aroused.[2] "CHLORAL HYDRATE produces a normal type of sleep, and is rarely followed by 'hangover'."[1]

Dosage: One to two 7½ gr., or two to four 3¾ gr. capsules at bedtime.

CAPSULES CHLORAL HYDRATE – *Fellows*

ODORLESS • NON-BARBITURATE • TASTELESS

3¾ gr. (0.25 Gm.) *BLUE and WHITE* CAPSULES CHLORAL HYDRATE—*Fellows*

• DAYTIME SEDATION

for the patient who needs daytime sedation and relaxation with complete comfort.

Dosage: One 3¾ gr. capsule three times a day, after meals.

3¾ gr.

EXCRETION — Rapid and complete, therefore no depressant after-effects.[3, 4]

Available: Capsules CHLORAL HYDRATE — Fellows
3¾ gr. (0.25 Gm.) Blue and white capsules . . . bottles of 24's and 100's
7½ gr. (0.5 Gm.) Blue capsules . . . . . bottles of 50's

Professional samples and literature on request

Fellows MEDICAL MFG. CO., INC. Pharmaceuticals

pharmaceuticals since 1866
26 Christopher St., New York 14, N. Y.

BIBLIOGRAPHY
1. Hyman, H. T.: An Integrated Practice of Medicine (1950)
2. Robbins, W. B., et al: A Course in Practical Therapeutics (1948)
3. Goodman, L., and Gilman, A.: The Pharmacological Basis of Therapeutics (1941). 22nd printing, 1951.
4. Solmann, T.: A Manual of Pharmacology, 7th ed. (1948), and Useful Drugs, 14th ed. (1947)

—Concluded from page 36a

Chloromycetin Ophthalmic Parke, Davis & Co., Detroit 32, Michigan. Powder for solution. For treatment of ocular infections. **Dose:** As indicated. **Sup.:** In individual vials (25 mg.) with droppers.

Crystalline Terramycin Hydrochloride Soluble Tablets, Chas. Pfizer & Co., Brooklyn 6, N. Y. This new dosage form is well suited to the preparation of ointments, liquids, dressings, and combinations of drugs for special purposes. **Dose:** As indicated. **Sup.:** Foil-wrapped, in boxes of 24.

Dormison, Schering Corp., Bloomfield, N. J. Non-barbiturate hypnotic. **Dose:** One or 2 capsules just before the patient is ready for sleep. **Sup.:** In bottles of 100 capsules (250 mg.).

Di-Paralene Calamine Cream Abbott Labs., North Chicago, Ill. Topical use for symptomatic relief of pruritus due to atopic dermatitis, contact dermatitis, urticaria, dermatitis medicamentosa, insect bites and mild sunburn. **Dose:** Applied topically 2 or 3 times daily or as directed by physician. **Sup.:** In 1-oz. (30 Gm.) tubes.

Eskel 20 mg., Smith, Kline & French Labs., Philadelphia 1, Pa. Coronary and bronchial dilator. This new smaller size will allow greater flexibility of dosage. **Dose:** As indicated. **Sup.:** In bottles of 50 tablets, 20 mg.

Lodomin Multivitamin Drops, Jackson-Mitchell Pharm., Inc., Los Angeles 25, Calif. A prophylaxis against vitamin deficiency. **Dose:** Infants under 1 year, 0.3 cc.; children 4-6 years, 0.45 cc.; children 7-9 years and adults, 0.6-1.2 cc. **Sup.:** In bottles of 15 cc. and 30 cc.

Methcolate B. F. Ascher & Co., Inc., Kansas City, Mo. In treating liver conditions including hepatic damage and deposition of cholesterol in atherosclerosis. **Dose:** 12 tabs. daily in divided doses. **Sup.:** In bottles of 100 and 1,000 tabs.

Netropine Hydrochloride, Wm. R. Warner Inc., New York, N. Y. An antispasmodic which overcomes spasm relieving pain and distress in spastic disorders of the gastro-intestinal and genito-urinary tracts and blocks the undesirable nerve impulses. **Dose:** One tablet orally every 4 to 6 hours, usually before meals and at bedtime. **Sup.:** In bottles of 100 50 mg. tablets.

Neutrazyme Suppositories Smith-Dorsey Co., Lincoln, Nebraska. For treating idiopathic pruritus ani. **Dose:** 1, 2 or more suppositories daily as determined. **Sup.:** In boxes of 12.

Nitrol Ointment, Kremers-Urban Co., Milwaukee, Wis. In treating peripheral vascular disturbances. **Dose:** 1 Gm. applied 3 or 4 times a day to the affected areas. **Sup.:** In 2-oz. and 1-lb. jars.

Provite B with Vitamin C, Ives-Cameron & Co., Inc., New York, N. Y. In vitamin deficiencies. **Dose:** As indicated. **Sup.:** In bottles of 100 and 1,000 capsules.

Quotane Lotion, Smith, Kline & French Labs., Philadelphia 1, Pa. In skin conditions of the moist, oozing type. **Dose:** Apply topically, seldom necessary to apply more than 4-5 times daily. **Sup.:** In 2 fl. oz. squeeze bottles.

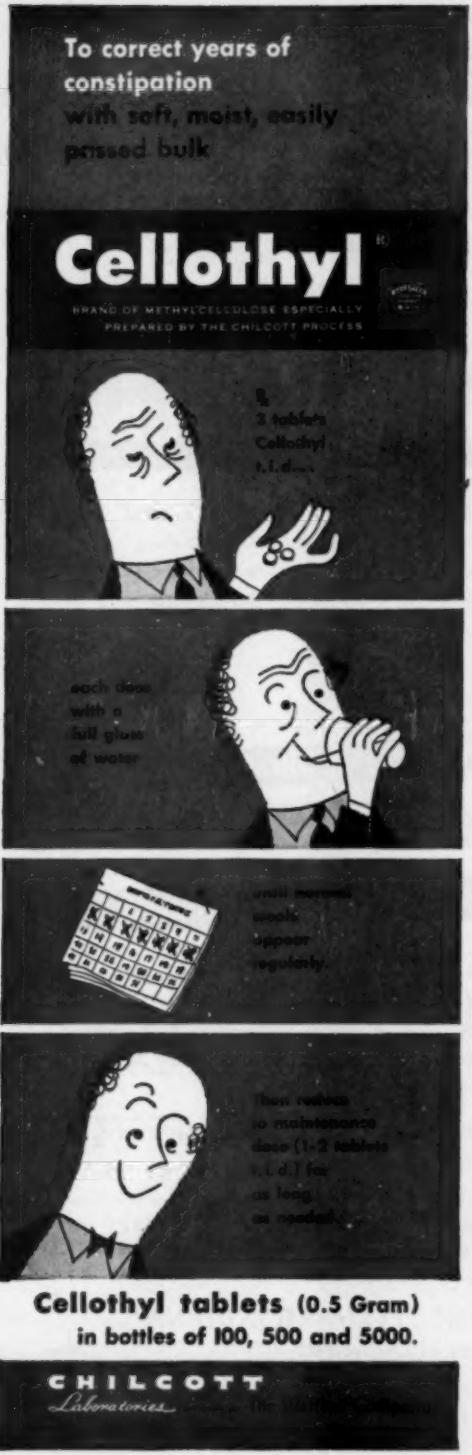
Stilbetin 100 mg., Diethylstilbestrol Tablets, E. R. Squibb & Sons, New York 22, N. Y. To be used where unusually high potency estrogens are needed, i.e. prostatic cancer, mammary cancer in women at least 5 years past the menopause whose disease is not amenable to surgery or x-ray, and the prevention of spontaneous abortion in pregnancy. **Dose:** As indicated. **Sup.:** In bottles of 50 tablets.

Theo-Lipo Bobst Pharm. Co., Inc., New York 17, N. Y. The first lipotropic hypotensor for the aging patient with impaired liver and circulatory conditions. **Dose:** 1 to 4 tabs. per day as indicated. **Sup.:** In bottles of 100 tabs.

Thiomerin Sodium, Wyeth, Inc., Philadelphia 2, Pa. In the treatment of congestive heart failure. Formerly a product of the Campbell Pharmaceutical Co., it is now manufactured and distributed by Wyeth exclusively. No changes have been made in the packagings. **Sup.:** 40 mg. mercury per cc. in 10 cc. and 30 cc. vials.

Vimone Bobst Pharmacal Co., Inc., New York 17, N. Y. Metabolic stimulant for women past forty for whom hormonal therapy alone is inadequate. **Dose:** 1 to 3 tabs. daily as indicated. **Sup.:** In boxes of 50 tabs.

Vagisol Smith-Dorsey Co., Lincoln, Nebraska. Antibiotic combination. **Dose:** As indicated. **Sup.:** In bottles of 36 tabs.



IMPROVING RECTAL COMPETENCE IN DYSCHEZIA

When diminished tonus and contractibility have rendered the rectum incompetent, "there can be no doubt" that Cellothyl is "of great value."[1] Ease and frequency of bowel movements can be increased regardless of duration of dyschezia[1] — provided, of course, that patients who have suffered for years do not expect overnight correction. Steady improvement in the expulsive competence of the rectum will be noted with Cellothyl as the presence of adequate soft bulk and its gentle mechanical stimulation act to —

1. initiate the call to stool
2. encourage prompt, complete evacuation
3. provide soft, moist, easily passed stools
4. eliminate the need for straining
5. minimize pain or trauma to local lesions.

The stomach and small intestine, usually not involved in dyschezia, are unaffected by Cellothyl, which remains in a fluid state until it reaches the colon. Here it thickens to a smooth gel to provide bulk where bulk is needed. Normal, easily passed stools usually begin in 3 to 4 days. (Patients conditioned to purgation may be permitted a mild laxative, together with Cellothyl for several days, then Cellothyl continued alone.) As ease and frequency of defecation increase, dosage should be decreased to the minimum required for comfortable function.

1. Newey, J. A., and Goetzl, F. R.: Permanente Med. Bull. 7:67 (July) 1949.

the NEW therapy

in "functional G. I. distress"...

Decholin with Belladonna

Patients complaining of gastrointestinal distress without detectable organic cause are common problems in daily practice. By combining spasmolytic action with improvement in liver function, *Decholin/Belladonna*—in such cases—gives symptomatic relief by

reliable spasmolysis

hydrocholeretic flushing of biliary tract

improved blood supply to liver

mild, natural laxation without catharsis

While of special value in functional dyspepsia, *Decholin/Belladonna* is, of course, treatment of choice in biliary tract disorders for thorough and unimpeded flushing of the biliary system.

DOSAGE: One or, if necessary, two *Decholin/Belladonna* tablets three times daily after meals.

PACKAGING: *Decholin* (brand of dehydrocholic acid) *with Belladonna*, bottles of 100 tablets. Each tablet contains dehydrocholic acid 3¾ gr. and belladonna ⅛ gr. (equivalent to tincture of belladonna, 7 minims).

Decholin, trademark reg.

AMES

AMES COMPANY, INC., ELKHART, INDIANA

AMES COMPANY OF CANADA, LTD., TORONTO

DB-Ip

For the Busy

Doctor's Office

the STANDBY model

FOR MAXIMUM SERVICE *anywhere* in the busy office...the STANDBY Model Baumanometer is light in weight, easy to move and complete in every detail. Simply place it next to the patient—*anywhere* in the office—by desk, chair or table. This true mercury-gravity instrument with the wide open EXACTILT Scale will give you scientifically accurate blood-pressure readings quickly and with the greatest of ease.

Ask any one of the thousands of doctors using a STANDBY Model...they tell us that it is a most satisfactory piece of equipment...that it is truly an indispensable part of their armamentarium.

Your surgical instrument dealer will gladly send you one for your inspection.

Accurate

Practical

Smart

Lifetime Baumanometer

W. A. BAUM CO., INC., NEW YORK 1, N. Y.

SINCE 1916 ORIGINATORS AND MAKERS OF BLOODPRESSURE APPARATUS EXCLUSIVELY

WHEN FLATULENCE MADE HISTORY

IT kindled the interest of an emperor. A twelfth century versifier was inspired to pay tribute to the compassion of the Emperor:

"A certain Roman Emperor was so kind,
Claudius by name,
He made a proclamation,
Escape of wind to be
No loss of reputation."

Indeed, Suetonius, the Roman historian, records the fact that the Emperor Claudius considered it desirable to issue a proclamation that flatus can be emitted at any time and any place where the need may arise. In his essay, "The Force of the Imagination," the French philosopher, Montaigne, wishfully comments that had it been that the Emperor would also have granted the ability to do so. Knowledge of this royal approval might have saved embarrassment for the Earl of Essex, when flatus escaped him audibly while bowing his way out from the presence of Queen Elizabeth. By the rules of modern manners, the perceptible manifestation of flatulency is not yet acceptable, and it is still causing embarrassment to millions.

Intestinal fermentation due to colon stasis is a frequent cause of flatulence. It may also result from disturbance of the peristaltic rhythm following the use of a harsh cathartic. It is now well established that cathartics that act high in the small intestines are likely to produce irregular peristalsis and cause considerable griping.

Because of its gentle action, principally on the large intestine, phenolphthalein is especially suitable for the relief of constipation accompanied by flatulence. According to Sollmann[1], phenolphthalein acts "similarly to the emodin cathartics. These act chiefly on the large intestine, as laxatives, aperients or ecproctics, with easier evacuation of formed stools." Goodman and Gilman[2] attribute the advantage to phenolphthalein that its cathartic action "is not accompanied by colic or intestinal griping."

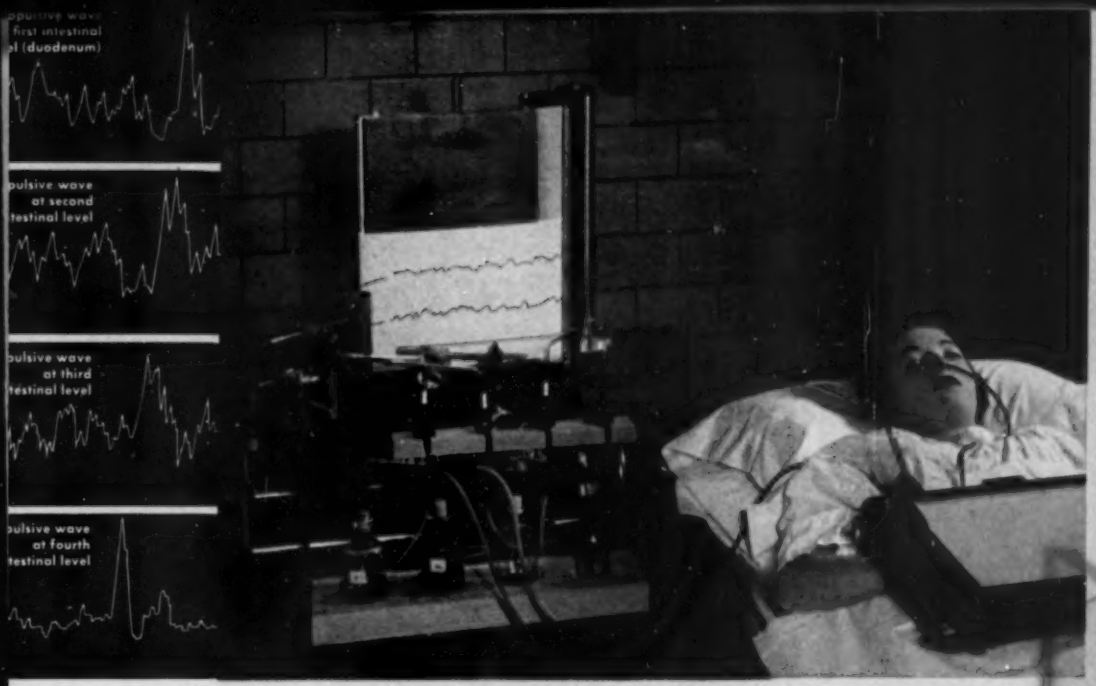
Special chemical control and biological standardization assure the uniform efficiency of the phenolphthalein used in Ex-Lax. The laxative action is gentle and "moderate," causing no sudden, embarrassing urgency during the day, and sleep is not disturbed when Ex-Lax is taken at bedtime.

Gentle action and unusual palatability lend distinction to Ex-Lax among laxatives. Its chocolated base imparts a pleasing taste to Ex-Lax, making it particularly suitable for use during pregnancy and for administration to children. An exclusive process assures the thorough distribution of the laxative ingredient, so that fractional parts of a tablet consistently yield a proportionate dose.

An increasing number of physicians recognize the merits of Ex-Lax and are using it in their practice. They have found it a safe laxative in a wide range of dosage.

To demonstrate its therapeutic advantages, a trial supply of Ex-Lax, and literature, gladly sent to physicians on request. Ex-Lax, Inc., Brooklyn 17, New York.

1. T. Sollmann: A Manual of Pharmacology. W. B. Saunders Co., 1948; page 177.
2. L. Goodman and A. Gilman: The Pharmacological Basis of Therapeutics. The Macmillan Co., 1941; page 803.



Spasmolysis at its Best . . . by

LIVING TEST

Intubation studies[1,2,3] increasingly confirm the findings of controlled clinical tests and broad professional experience; they dramatically demonstrate the *marked superiority of natural belladonna alkaloids* over the synthetics in relieving smooth muscle spasm.[2,3]

Donnatal employs precise proportions of the principal alkaloids of belladonna, together with a minimal phenobarbital dosage, to intensify the belladonna effects and help correct emotional factors contributing to the provocation of spasm.

REFERENCES: 1. Chapman, W. P., Rowlands, E. N., and Jones, C. M.: New England J. Med., 243:1, 1950. 2. Kramer, P. and Ingelfinger, F. J.: Med. Clin. North America, 32:1227, 1948. 3. Posey, E. L., Bargen, J. A., and Dearing, W. H.: Gastroenterol., 11:344, 1948.

FORMULA: Each tablet, each capsule, and each 5 cc. (1 teaspoonful) of Elixir, contains 0.1037 mg. hyoscyamine sulfate, 0.0194 mg. atropine sulfate, 0.0065 mg. hyoscine hydrobromide, and 16.2 mg. (¼ gr.) phenobarbital.

A. H. ROBINS CO., INC., RICHMOND 20, VA.

Donnatal®

Robins

TABLETS • CAPSULES • ELIXIR

WHENEVER and WHEREVER spasm of smooth muscle causes pain or dysfunction

First aid for the *"digestive casualty"*

Entozyme greatly simplifies a broad therapeutic approach to many often complex disturbances of the gastro-intestinal tract, through its provision of potent amounts of the principal digestive enzymes: pepsin, pancreatin (with its lipase, amylase, and trypsin), and bile. Its special "tablet-within-a-tablet" construction controls the release of each essential digestive enzyme at its own appropriate gastro-enteric level... in its optimal state of enzymatic activity. This unique action explains the relief gratifyingly elicited in so many cases of pathologic or functional impairment of the digestive process.[1,2,3]

REFERENCES: 1. Kammandel, H. et al.: Bull. N. Y. Med. Coll., Flower & Fifth Ave. Hosps. (in press). 2. McGavack, T. H. and Klotz, S. D.: Bull. N. Y. Med. Coll., Flower & Fifth Ave. Hosps., 9:61, 1946. 3. Weisberg, J. et al.: Am. J. Dig. Dis., 15:332, 1948.

FORMULA: Each tablet contains 300 mg. pancreatin, U.S.P., 250 mg. pepsin N.F., and 150 mg. bile salts.

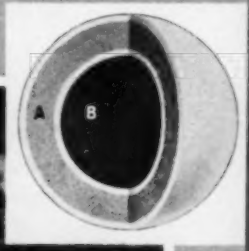
A. H. ROBINS CO., INC., RICHMOND 20, VA.

ENTOZYME®

Robins

A SINGULARLY effective, DOUBLE-layered tablet, with TRIPLE-enzyme digestive action.

Gastro-soluble enzymes are released from outer shell (A) in stomach; entero-active enzymes from inner core (B) in duodenum and jejunum.



To encourage normal healing

in
wounds
ulcers
burns
dermatoses

Chloresium

Ointment
and
Solution (Plain)

brand of water-soluble chlorophyll derivatives

***Here are typical comments from published reports on* CHLORESIUM –**

in decubitus ulcers . . .

"early epithelization not previously seen . . ."[1]

in dermatoses . . .

"alleviation of itching and burning . . . reduction in the erythema and edema . . . absence of oozing . . ."[2]

in wounds . . .

"tended to produce a clean granulating wound . . . effective deodorant when used on foul-smelling wounds."[3]

in burns . . .

"the worst hand, treated with chlorophyll, soon looked better than the less severely burned hand . . . the chlorophyll-treated hand was more comfortable."[4]

Literature and samples on request

40% Price Reduction . . . Effective September 1

(1) Carpenter, E. B.: Clinical Experiences with Chlorophyll Preparations, Am. J. Surg. 77:167, 1949. (2) Langley, W. D., and Morgan, W. S.: Chlorophyll in the Treatment of Dermatoses, Pennsylvania M. J. 51:64, 1947. (3) Moss, N. H.; Morrow, R. A.; Long, R. C., and Bardin, I. S.: Effectiveness of Chloresium in Wound Healing and Deodorant Effects, J.A.M.A. 140:1330 (Aug. 27) 1949. (4) Bowers, W. F.: Chlorophyll in Wound Healing and Suppurative Disease, Am. J. Surg. 73:97, 1947.

RYSTAN COMPANY, INC · Mount Vernon, New York


Schering
ANNOUNCES

NEW

DORMISON*

new, non-barbiturate hypnotic

for safe, sound sleep without drug hangover free from habit-forming properties of the barbiturates

safe

free from habit-forming or addiction properties of barbiturates; rapidly metabolized; no cumulative action; no toxic effects on prolonged use

acts gently and quickly in insomnia

mild hypnotic action quickly induces restful sleep

no prolonged suppressive effect

action subsides after a few hours; patient continues to sleep naturally

no drug hangover

patient awakens refreshed with no "drugged" feeling

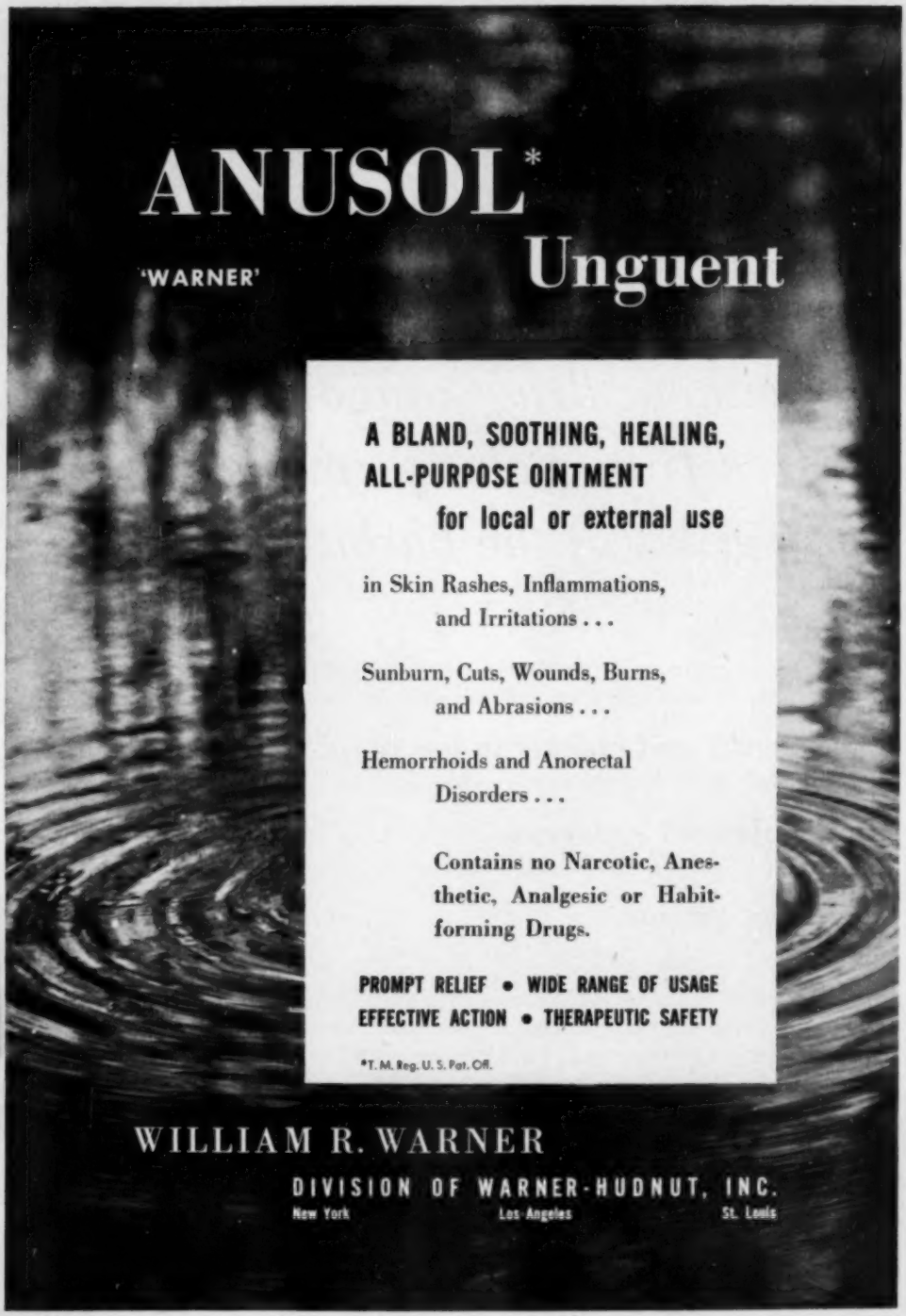
DORMISON is a substance new to pharmacology, completely different from barbiturates and other hypnotics. It contains only carbon, hydrogen and oxygen. It has no nitrogen, bromine, urea residues, sulfone groups or chemical configurations present in depressant drugs now in use.

The usual dose of DORMISON (methylparafynol†) is one or two capsules, taken just before the patient is ready for sleep. DORMISON's wide margin of safety allows liberal adjustment of dosage until the desired effect is obtained. DORMISON is supplied as 250 mg. soft gelatin capsules in bottles of 100.

Schering CORPORATION • BLOOMFIELD, N. J.

*T.M. †U.S. Pat. Pending

DORMISON


ANUSOL*
'WARNER'
Unguent
A BLAND, SOOTHING, HEALING,
ALL-PURPOSE OINTMENT
for local or external use
in Skin Rashes, Inflammations,
and Irritations . . .
Sunburn, Cuts, Wounds, Burns,
and Abrasions . . .
Hemorrhoids and Anorectal
Disorders . . .
Contains no Narcotic, Anesthetic, Analgesic or Habit-forming Drugs.
PROMPT RELIEF • WIDE RANGE OF USAGE
EFFECTIVE ACTION • THERAPEUTIC SAFETY
*T. M. Reg. U. S. Pat. Off.
WILLIAM R. WARNER
DIVISION OF WARNER-HUDNUT, INC.
New York
Los Angeles
St. Louis

in peptic ulcer–

NEW CONVENIENT CHLOROPHYLL THERAPY

Chloresium MUCINOID Tablets • Powder

for rapid relief of symptoms and tissue repair even in intractable cases

All the advantages of CHLORESIUM POWDER* are now available in convenient *tablet* form: same unique combination of healing agent plus antacids in a mucin-like base — same superior clinical results — and in a form that's easy to take.

highly concentrated, purified water-soluble chlorophyll promotes healing of affected areas, duplicating the outstanding results obtained in treatment of external lesions.

specially prepared, mucilaginous okra base clings tenaciously to mucosal walls, protecting against erosion and maintaining the chlorophyll in prolonged contact with the lesion.

prompt, sustained antacid action — without undesirable side effects — provided by magnesium trisilicate and aluminum hydroxide.

packaging: CHLORESIUM MUCINOID is available in bottles of 50 and 200 tablets and in boxes of 25 powders.*

*CHLORESIUM POWDER will continue to be available in boxes of 25 envelopes but will now be sold under the name CHLORESIUM MUCINOID.

RYSTAN COMPANY, INC. Mount Vernon, N. Y.

the Fallacy of the Balanced Diet

"Deficiency diseases tend to be multiple and it should not surprise you that people eating at the same table may all have deficiency diseases; the surprising thing is that one may have one deficiency disease, while another person may have an entirely different disease.[1]"

1. Spies, Tom D.: Recent Progress In Nutrition, Postgraduate Med., 6:97, August, 1949.

Vi terra — *all in a single capsule*

Cobalt	0.1 mg.	Vitamin A	5,000 U.S.P. Units
Copper	1 mg.	Vitamin D	500 U.S.P. Units
Iron	10 mg.	Thiamine HCl	3 mg.
Iodine	0.15 mg.	Riboflavin	3 mg.
Calcium	213 mg.	Pyridoxine HCl	0.5 mg.
Manganese	1 mg.	Niacinamide	25 mg.
Magnesium	6 mg.	Ascorbic Acid	50 mg.
Molybdenum	0.2 mg.	Pantothenate	5 mg.
Phosphorus	165 mg.	Tocopherols, Type IV	5 mg.
Potassium	5 mg.		
Zinc	1.2 mg.		

Available at prescription pharmacies . . . supplied in bottles of 100 capsules

J. B. ROERIG AND COMPANY Roerig Rx 536 LAKE SHORE DRIVE, CHICAGO 11, ILL.

A New Achievement in the Control of Hypertensive Crises

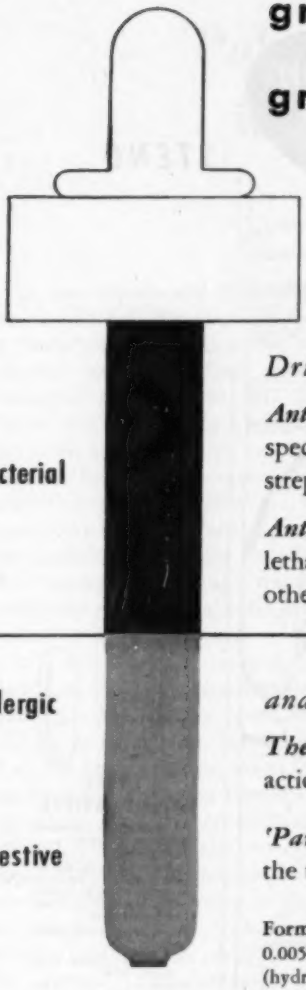
*Veriloid** INTRAVENOUS

A SAFE, POWERFUL HYPOTENSIVE AGENT CAPABLE OF DROPPING THE BLOOD PRESSURE TO NORMOTENSIVE LEVELS WITHIN A MATTER OF MINUTES IN A VAST MAJORITY OF PATIENTS

An invaluable emergency drug for immediate and substantial reduction of the arterial tension

*Trademark of Riker Laboratories, Inc.

this nose-drop destroys both **gram-positive** and **gram-negative** bacteria



In Drilitol you now have an entirely new and strikingly effective approach to the treatment of common upper respiratory tract infections.*

Drilitol contains:

Anti-gram positive gramicidin— specific against such organisms as staphylococci, streptococci, pneumococci and diphtheroids.

Anti-gram negative polymyxin— lethal to the Klebsiella, H. influenzae and numerous other potentially dangerous pathogens.

and Drilitol also contains:

Thenylpyramine hydrochloride—antihistaminic action for control of local allergic manifestations.

'Paredrine' Hydrobromide—vasoconstriction for the therapeutic benefits of ventilation and drainage.

Formula: Contains thenylpyramine hydrochloride, 0.2%; gramicidin, 0.005%; polymyxin B sulfate, 500 U/cc.; 'Paredrine'* Hydrobromide (hydroxyamphetamine hydrobromide, S.K.F.), 1%. Preserved with thimerosal, 1:100,000. *Dosage*: Adults: 1 dropperful in each nostril, 4 or 5 times a day. Children: ½ the adult dosage. Supplied: In ½ fl. oz. bottles with special dosage-adjusted dropper.

DRILITOL

*T.M. Reg. U.S. Pat. Off.

Smith, Kline & French Laboratories, Philadelphia

FOR THE *Stock-room* STENO

THE day's half gone and her energy is all gone. Pale, listless, her blood picture will probably reveal the typical IBEROL case—hypochromic microcytic anemia.

Inorganic iron is specific in such cases, but is iron alone enough?

Notice the IBEROL formula. Such a formula considers that hemoglobin formation involves more than iron alone . . . that if there is a deficiency of iron, other deficiencies may also exist . . . that recovery may be more rapid and complete if other missing elements are supplied to supplement the diet.

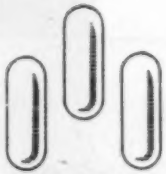
Just three IBEROL tablets a day is the average adult dose. For prophylaxis in pregnancy and old age, one or two tablets daily are usually sufficient. Your pharmacy has IBEROL in bottles of 100, 500 and 1000. **Abbott**

Specify

IBEROL®

Tablets

(Iron, B_{12}, Folic Acid, Stomach-Liver Digest, with Other Vitamins, Abbott)



THREE IBEROL TABLETS:

the average daily therapeutic dose for adults, supply:

Ferrous Sulfate	1.05 Gm. (representing 210 mg. elemental iron, the active ingredient for the increase of hemoglobin in the treatment of iron-deficiency anemia)

Plus these nutritional constituents:

Thiamine Mononitrate (6 times MDR*)	6 mg.
Riboflavin (3 times MDR*)	6 mg.
Nicotinamide (2 times RDA†)	30 mg.
Ascorbic Acid (5 times MDR*)	150 mg.
Pyridoxine Hydrochloride	3 mg.
Pantothenic Acid	6 mg.
→ Vitamin B_{12}	30 mcg.
Folic Acid	3.6 mg.
Stomach-Liver Digest	1.5 Gm.

*MDR—Minimum Daily Requirement

†RDA—Recommended Daily Dietary Allowance

Palpable "Masses" in the Abdomen

JULIUS BAUER, M.D., F.A.C.P.*
Los Angeles, Calif.

In case reports and on patients' charts we usually find the simple statement that a "mass" was palpable in one of the abdominal quadrants. Only sometimes we encounter the statement that it was believed that the mass probably might be the liver, spleen, kidney, etc. For many years it has been my experience that in clinical teaching palpation of the abdomen is the most neglected part of physical examination. Otherwise excellent and well informed interns and residents quite frequently overlook an enlarged liver or spleen or palpable tumors.

It is not sufficiently realized that palpation is an art requiring particular technic, training, thoroughness and experience. This is, in my opinion, not emphasized as it should be in teaching students physical examination. Palpation should be carried out gently with slowly increasing pressure of the whole palm, not the finger tips. The palpating fingers should glide over a suspected resistance or the edge of an enlarged liver or spleen. This is greatly facilitated by deep breathing of the patient. Intraperitoneal "masses" move caudad on inspiration, and the examining hand should try to meet such "masses" by slight upward movement. Palpation must be done repeatedly and not only with the patient lying on his back. In right or left lateral position, tumors, the gallbladder, the edge of an enlarged liver or spleen may be felt, and the kidneys may be palpable in standing or slightly stooping patients, while they are not felt if the patient is lying on his back. The usual statement that a "mass" can be felt in one of the abdominal quadrants is by far not all that can be learned from adequate palpation. Its size, border, surface, consistency, passive and respiratory mobility must be investigated.

A palpable mass in the right upper quadrant should be regarded as *liver* if it shows definite respiratory mobility and an edge which can be followed up to both sides corresponding to the anatomy of this organ. A normal liver in healthy persons usually is not palpable. In the lateral, stocky type of habitus it may be felt in the medioclavicular line or somewhat to the right from it. Palpable liver does not necessarily mean enlarged liver. It may only be pushed caudad by a low diaphragm as in pulmonary emphysema or by a subphrenic abscess. It may represent what is designated by misnomer as hepatoptosis. In women with very flabby and distended abdominal wall or large abdominal hernia the liver may be displaced far caudad and be movable upward by manual pressure. In women of longitudinal asthenic body build with a narrow inferior thoracic aperture, short anteroposterior distance and general splanchnoptosis, the liver also may be palpable without actual enlargement. These cases are not to be interpreted as ptosis but are due to abnormal shape

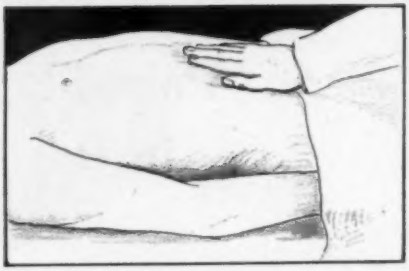
* Clinical Professor of Medicine, College of Medical Evangelists, Los Angeles, California.

and rotation of the liver around a transverse axis. It should be remembered that large amounts of blood can be stored in the liver and, therefore, the size of the organ may show considerable variations within a short time.

The enlarged liver is soft in consistency, and the palpable edge sharp in acute hepatitis. The liver becomes firm if the enlargement has been of long standing as it may occur in chronic obstructive jaundice or passive congestion in right heart failure. Then the edge will be rounded. The liver may be quite hard in cirrhosis, amyloidosis, leukemia, Hodgkin's disease, carcinomatosis and others. The edge of a cirrhotic liver usually is sharp. Fatty liver due to fat infiltration in chronic alcoholism or in severe tuberculosis of the lung or intestines is not so hard, and its edge not so sharp as in cirrhosis. I have seen a fatty liver of tremendous proportions in a case of advanced pulmonary tuberculosis. In some instances fatty liver may be due to lack of lipocaic caused by a disease of the pancreas.

The uneven wrinkled surface in cirrhosis of the liver is not often recognized by palpation. Hard and usually multiple, round, nodular and painless elevations can be felt in metastatic carcinomatosis of an enlarged liver. The characteristic appearance of syphilitic hepar lobatum may be recognized by palpation if deep incisures separate rounded masses of liver tissue. Large single nodes may be cysts (echinococcus), adenomas, malignant tumors or abscesses. The latter will be conspicuous by some tenderness and, of course, will be assumed on the basis of history and the general clinical picture. Passive congestion of the liver is painful, and the liver tender on pressure if it has developed rapidly and if it has been only of short duration. Infectious hepatitis may exhibit tenderness on pressure.

Pulsation of an enlarged liver may be due to transmitted pulsation of the aorta



Palpation should be carried out gently with slowly increasing pressure of the whole palm, not the finger tips.

as in aortic regurgitation or to a systolic venous wave as in tricuspid regurgitation. Very rarely it is produced by an aneurysm of the hepatic or cystic artery which may be felt as a pulsating tumor causing a systolic murmur.

Usually the *gallbladder* is palpable only if it is enlarged and distended by concretions or hydrops (obstruction of the cystic duct), if its wall is calcified or if it is the site of carcinoma. In the differential diagnosis between obstructive jaundice due to a malignant growth at the papilla of Vater or in the bile duct and obstructive jaundice due to a stone in the common duct, a palpable distended gallbladder speaks in favor of malignancy, since calculous obstruction usually is associated with chronic cholecystitis and a shrunken gallbladder. This sign attached to the name of Courvoisier, however, is not infallible. A so-called Riedel's lobe must not be confused with the gallbladder or a tumor. It is a tongue-like projection of the right lobe of the liver extending over the gallbladder, probably as a result of previous cholecystitis and pericholecystitis. It is not always easy to distinguish an enlarged gallbladder from extrahepatic masses. Occasionally the personal and family history and findings on physical examination may be misleading. A palpable carcinoma of the right flexure of the colon can be mis-

taken for a distended gallbladder if the patient is known to have suffered from gallbladder disease in the past. Such an instance was reported in my book on "Differential Diagnosis of Internal Diseases" on p. 665.

Not every palpable *spleen* is enlarged; it also may be a floating spleen that lies deep below the costal margin. It is recognized by its free mobility and superficial situation. Palpable notches are characteristic of spleen; they are not felt, however, in an acutely and not too greatly enlarged spleen. Distinction of splenomegaly from a very large left lobe of the liver or from a ptotic or enlarged kidney is often difficult. The left hepatic lobe is distinguished from splenomegaly by two signs. First its edge is continuous with the right hepatic lobe, and secondly it moves caudad on inspiration whereas the spleen moves towards the umbilicus. In right lateral position of the patient the distinction usually is easier. A renal tumor is less movable on respiration, gives the sensation of ballottement on bimanual palpation, and usually is overlaid by tympanitic intestines. These signs, however, are not always reliable. Very large spleens move only very little on respiration and the mobility of the spleen is impaired by perisplenitic adhesions. Quite exceptional is a developmental anomaly of the spleen which occupies wholly a retroperitoneal position. It then is situated posterior to the stomach and colon, and no edge or notches can be felt even if the spleen is enlarged. It may cause a left-sided hydronephrosis by displacement of the kidney downward. Pyelography in such cases reveals the position and the shape of the kidney.

The surface and shape of an enlarged spleen usually are smooth and regular, respectively. Tuberculous nodes, Hodgkin's granulomas, cysts or tumors may cause an uneven surface and deformation of the shape. The consistency of the spleen also should be noted. It is soft in acute swelling as in typhoid fever or other acute infectious diseases, and firm in chronic types of splenomegaly. I have seen a rather firm spleen, however, also in infectious mononucleosis and infectious hepatitis. Subcutaneous injection of adrenalin sometimes is of value to distinguish a fibrotic chronic splenomegaly from one due to congestion. Only the latter will show a remarkable temporary diminution in size due to contraction of the capsule.

Splenomegaly is rarely due to a localized disease of the spleen and much more frequently caused by a systemic disease or by an impairment of portal circulation. The most common etiologic factors are acute or chronic infections, diseases of the hemopoietic system, and stasis with hypertension in the portal circulation.

It might be well to emphasize the occurrence of splenomegaly in cases of infectious mononucleosis, infectious hepatitis, systemic tuberculosis, late syphilis, histoplasmosis and rheumatoid polyarthritis (Still-Chauffard syndrome); furthermore, in polycythemia vera, hemolytic anemia, thrombocytopenic purpura, sarcoidosis, in the uncommon cases of myelofibrosis and in rare instances of toxic goiter.

It is well known that cancer of the *stomach* may be far advanced without being palpable. It should, however, be looked for by repeated palpation. It may disclose a tumor which moves caudad with deep inspiration and can be retained in this place by manual pressure on deep expiration.

X-ray will decide whether such a palpable intraperitoneal mass originates within the stomach or whether it is attached to it from outside. This may occur if the mass arises from the intestines, lymphnodes, mesentery or omentum.

A palpable mass in the *right lower quadrant* may be due to a periappendiceal

abscess, regional ileitis, ileocecal tuberculosis, actinomycosis, some other mycotic or granulomatous process and particularly malignant tumor.

In the *left lower quadrant* a palpable mass usually is carcinoma or the result of peridiverticulitis.

Retroperitoneal masses are not or only slightly movable on respiration. They may belong to the pancreas, kidneys, adrenals or may be enlarged retroperitoneal lymphnodes or benign tumors as well as sarcomas arising from structures of the posterior abdominal wall.

1680 Vine Street

Tromexan in Thrombotic Conditions During Pregnancy

Wright, in *J. Obst. & Gynec. Brit. Emp.* [*58*:273 (April 1951)], reports that nine women, from 8 to 37 weeks pregnant, were treated for thrombotic conditions with Tromexan, a coumarin derivative. Five patients received both heparin and Tromexan at the start of therapy; four received Tromexan alone. The initial dose of Tromexan was 1.2 Gm., given over a 12-hour period; further dosage depended on prothrombin response. Treatment was continued for 5 to 18 days with gradual reduction of dosage before final cessation. Prothrombin concentration, determined daily, was maintained between 30 and 40 per cent of normal, to minimize the risk to the fetus.

All patients had thrombophlebitis and one also was considered to have a pulmonary infarct. All made a satisfactory recovery and were later delivered of normal infants, except one diabetic patient whose infant died after 24 hours.

In contrast to discouraging reports in the past on the use of coumarin substances for gravid animals and human beings, the author's experience has been considerably more favorable. Although she advises against giving coumarin derivatives in the last few days before the onset of labor, she feels that "administration of this drug earlier in pregnancy is not unduly hazardous provided that it is not prolonged and that the prothrombin level is carefully controlled each day."

Benzocaine Ointment in Postpartum Distress

Postpartum distress from hemorrhoids, episiorrhaphy wounds, and fissured nipples is a common condition with many new mothers. Relief from these ailments, due to a lack of any competent specific agent, has been primarily on an empirical basis, and has varied from simple nursing remedies to the use of opiates.

An effective therapeutic measure, which is simple to use is reported by Herbert E. Schmitz, Charles J. Smith, and George A. Carberry in the *Western Journal of Surgery, Obstetrics and Gynecology* [59: 117-119 (March 1951)]. This agent consists of a topical anesthetic ointment containing 20% dissolved benzocaine and oxyquinoline benzoate in a bland, water-soluble base (Americaine).

Seventy-six patients with painful episiorrhaphy wounds were relieved in an average of seven minutes, with an average duration of 5.5 hours, duration of therapy 3.5 days. Eleven patients suffering from fissured nipples were relieved in an average of 20 minutes. Duration of relief after one application averaged 5 hours, and duration of therapy 2.3 days. Thirteen patients with tender hemorrhoids were relieved in an average time of 10 minutes. Average duration of relief after one application was 6 hours, and average duration of therapy 4.4 days.

The authors conclude that the 20% dissolved benzocaine ointment is a simple and effective means of relieving these common distressing discomforts in the parturient.

Chronic Ulcerative Colitis

This summarization attempts to cover the essential information on the subject, including therapy, and is designed as a time-saving refresher for the busy practitioner.

History When there are many ways to do something, and no way is outstanding, it is safe to assume that the truly correct way has not been found.

There is no outstanding theory to explain chronic ulcerative colitis (C U C), but there are many theories. There is no outstanding treatment but there are many ways to treat C U C. Indeed this is a disease of many ways.

This is a disease of all ages, races, climates, seasons and occupations. The highest incidence is from age 20 to 40. There is no indication of familial tendency. The cause is unknown.

As far back as 1784, Veegens[41] correlated psychic and somatic factors in disturbances of gastric physiology. Wightman[42] in 1808 and Parsons[30] in 1841 furthered this correlation. Wolf and Wolff[43] have a fascinating book devoted to modern clinical studies. Grace[15] applies these observations to C U C. Innumerable writers today emphasize the importance of emotional factors in C U C. The psychic theory has never been so popular.

Perhaps the role of psychic factors is being over-emphasized. A few years ago the principal treatment for C U C consisted of injections of sera and vaccines. This treatment was based on a now discarded theory that the diplostreptococcus was the specific causative agent. Later an extract of hog intestines achieved great popularity. The theoretical justification for bad tasting hog extract therapy postulated an intestinal deficiency.

The lysozyme theory suggested an intestinal secretary excess. Lysozyme, a basic protein of low molecular weight, is found in human tears, serum, saliva, gastric juice and stools. The feces of C U C patients were found to contain 27 times as much lysozyme as the feces of normal individuals.[29] Clinical improvement in C U C patients was discovered to correspond with a fall in the daily output of lysozyme in the stool. Oral administration of lysozyme to dogs caused ulcerations in the stomach and intestines.

Allergists tend to favor a theory of food sensitivity. Vitamin deficiency is the favorite explanation of other men. Excessive intestinal activity in C U C suggested vagotomy as a therapeutic procedure. At first this was received with enthusiasm but at last the procedure has been discarded. Each theory suggests some new

---

Reprints available from the Editorial Research Department of the Medical Times 676 Northern Boulevard, Great Neck, L.I., N.Y.

Permanent library binders, sufficient to hold 36 different "refresher" reprints, sent Postpaid, $4.00.

treatment. Each apparently successful treatment leads to a new hypothesis of causation.

The history of C U C is the story of medicine's frustration in the attempt to understand and control this dreadful disease.

Symptoms and Diagnosis A patient need not be severely ill to have ulcerative colitis. Diarrhea is not essential for the diagnosis. Indeed the stool may be hard and dry. Usually there is blood and mucus. When these cardinal signs are the only evidence of the disease, involvement is limited to the rectum or rectosigmoid. The greatest hope for cure lies in recognition and treatment when the involvement is mild and limited to this region.

Diarrhea with blood, pus and mucus indicates active ulceration. Additional findings are anemia, increased sedimentation rate, fever and sometimes leukocytosis. Whenever recurrent diarrhea is a symptom, this disease must be considered. Unpredictable remissions and exacerbations are characteristic. Cramping abdominal distress, anorexia, weakness and varying degrees of malnutrition are usually noted.

The diarrhea may consist of from one to thirty loose stools daily. Great mental anguish is caused in a fastidious patient by the unpredictableness of bowel movements. Loss of defecation control frequently occurs. Nausea and vomiting are not unusual.

Proctoscopic examination reveals a diffusely inflamed, friable, bleeding, superficially ulcerated, granular mucosa in 95% of patients with active C U C.

Clinical symptoms are usually well established when the earliest radiographic findings are visible by barium enema. The colon must be free of stool when the barium is introduced. Castor oil preparation is suggested in every case where it can possibly be tolerated. Compound licorice powder is a less valuable preparation and saline purges are valueless. When catharsis is absolutely contraindicated, repeated saline enemas must be utilized. The actual barium mixture employed is likewise important. Marks[25] has demonstrated the greater mucosa detail which is obtainable by the use of methylcellulose* mixed with the barium.

Earliest radiographic findings occur in the rectum and sigmoid. Thickening of the musoca is suggested by a change in the normal, irregular crinkling of the mucosal pattern. The folds are coarse and tend to become parallel in contrast to the normal, irregular appearance. The post-evacuation films are more helpful in studying this change. Pinpoint to pinhead erosions appear as scattered, minute serrations. These are best seen in segments lying closest to the film. In the postero-anterior projection, such areas are the sigmoid and transverse colons.

Later x-ray findings are the disappearance of haustrations, shortening of the colon (with rapid filling and emptying because of reduced capacity) and shagginess of outline. Pseudo-polyposis is the appearance of swollen (edematous) mucosal tags between areas of deep ulceration during the acute phase, or the effect of fibrous tags, during the late, cicatricial phase of C U C. Fibrosis of the wall results in rigidity which may be recognized on fluoroscopy.

Direct correlation is not found between the radiographic evidence of involvement and the clinical evidence of severity or extent of disease.

Course and Prognosis Onset of colitis may be insidious, severe or fulminating. The insidious onset occurs in almost 50% of cases and is characterized by bloody rectal discharges without other obvious symptoms.

Severe onset occurs in 30% of cases. The disease begins with sudden, severe bloody dystentery but there is no sepsis or toxemia.

* *cf.* discussion under "Symptomatic Therapy".

Fulminating onset occurs in 20% of cases. This is characterized by septic fever, toxemia, violent sanguinopurulent dysentery and rapid depletion.

Bargen has reported eight courses which the disease may follow, as determined from review of 380 carefully studied cases:

1. insidious onset and mild disease throughout 18%
2. intermittent disease with declining severity 13%
3. severe onset with complete recovery 6%
4. severe onset and constant without remission 12%
5. insidious onset but slowly progressive without remission 14%
6. intermittent disease with progressive severity 30%
7. insidious onset with slow progression changing to fulminating and ending fatally 4%
8. fulminating throughout, ending fatally 3%

Exacerbations and remissions characterized the disease in 80% of cases. Relapses are more common during months when upper respiratory infections are prevalent. Emotional upsets are blamed for many recurrences. Sloan[37] found no statistically significant relationship between relapses and any of the factors blamed for the relapses.

The mode of onset has a bearing on prognosis. Fulminating colitis is the most difficult to treat. Two-thirds of surgical fatalities occur in fulminating cases. Early surgery or early use of ACTH or Cortisone is advisable.

Mortality rate is highest in the first two years of the disease. The older the person at the time of onset, the better the prognosis. Malignancy as a complication is much more frequent in patients whose colitis began before the age of 20. The usual causes of death are:

1. causes unrelated to C U C 20%
2. causes where C U C contributed 30%
3. C U C without complications 50%

One should *never* attempt to estimate the severity or prognosis on the first observation of the patient.

The potential reversibility of C U C has

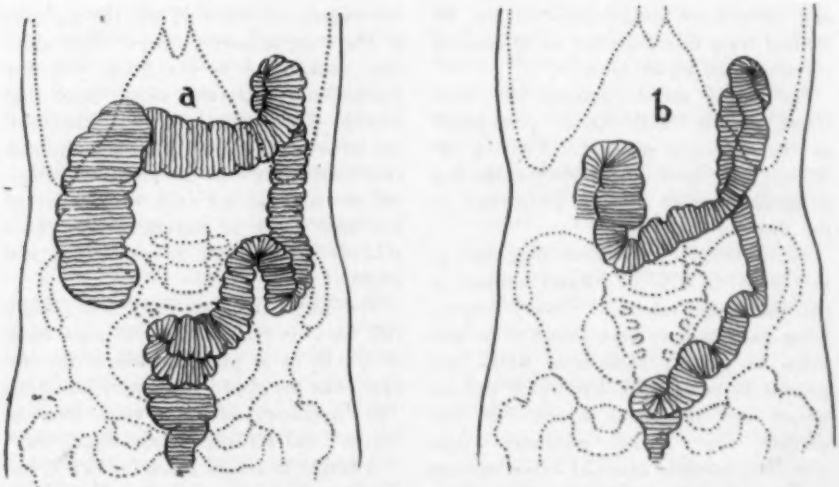


Fig. 1. Diagrammatic drawing showing the difference between a normal colon (a) and the colon in a case of CUC (b).

recently been emphasized[20] by men who have made repeated, objective observations of several dozen patients. Follow-up studies reveal pronounced improvement and even complete healing. Radiographic films demonstrate the return to normal conditions of colons which previously showed rigidity, scarring, and even rectal strictures. The extent of x-ray involvement does not correlate directly with the mode of onset, duration of symptoms, clinical severity or the prognosis. Variations in clinical symptoms occur independently of the x-ray appearance.

The proctoscopic appearance is hardly better for prognostic use. Severity of the disease does not correlate well with the appearance of the rectal mucosa and the full extent of involved colon cannot be judged accurately.

Until therapeutic management is more uniform, prognosis in C U C will remain a great unknown.

Etiology C U C is the product of the combined action of numerous factors not all of which are operative in all cases: infections, abnormal nutrition, allergic sensitivity to food substances, sensitization of the colon to infectious agents, and physiologic disturbances of the intestinal tract as manifested by disordered secretory and motor function.

No single micro-organism has been found (which fulfills Koch's postulates) as the causative agent.[14] Vitamin deficiency may be a contributory cause but is probably more often a by-product of the disease.

Food allergy[1, 35] has been suggested as the cause of C U C. Exacerbations of the disease are related to dietary laxness. Some patients have been shown to be sensitive to protein substances which are present in cow's milk but which can be traced back to grasses devoured by the grazing cow. These substances can, therefore, produce seasonal exacerbations. Pollens dust and bacterial sensitivities are occasionally causative factors. Vascular allergy explains the erythema, edema and ready bleeding of the bowel mucosa. Ulcer formation is secondary to vascular thrombosis, thus resembling canker sores from bacterial, drug or nutritional allergy. Two other explanations are offered for the ulcers. Hyper-peristalsis rushes pancreatic secretions into the colon, producing denudation of mucosa. Hypersensitivity of the mucosa to specific foods produces sloughing. Rowe believes that the fact of localization of C U C in the colon is better explained by allergy than by any alternative hypothesis.

Emotional factors are productive of disturbed gastrointestinal physiology.[43] Dennis[12] tells of producing engorgment of the rectal mucosa and superficial petechial hemorrhages by discussing an emotionally disturbing subject with susceptible patients. Grace[15] describes a definite sequence between emotional stress and the onset of symptoms in C U C.

Bargen decries the emphasis on emotional factors. In 2000 cases, emotional upsets preceded the onset of symptoms only 71 times.[37] Perhaps the Mayo Clinic statistics are not so reliable as the opposing impressions derived from contemporary experience. First of all, the patients at Mayo are largely farmers. Their agrarian background is not filled with the psychological stresses which beset the average city dweller. Secondly, the present interest in eliciting information about emotional factors in disease (psychological studies) did not exist when many of the 2000 cases in Bargen's series were seen at Mayo Clinic between 1918 and 1950).

The most frequent antecedent condition found in relation to the original onset of C U C, or to exacerbations of the disease, was an upper respiratory infection. The frequency of this most frequent "cause" was statistically not significant.[27]

A single, definitive cause for C U C has not been found.

Differential Diagnosis Many condi-

tions inside and outside the colon produce symptoms suggestive of colitis. Not all of these appear in the following list:

1. Diverticulosis and diverticulitis
2. Parasitic dysentery
3. Typhoid
4. Regional enteritis
5. Food Poisoning
6. Uremia
7. Sprue
8. Pellagra
9. Fecal impaction
10. Foreign bodies
11. Cancer of the sigmoid or rectum
12. Benign tumors
13. Polyposis
14. Benign stricture
15. Volvulus and intussusception
16. Meckel's diverticulum
17. Appendicitis
18. Granulomatous lesions
19. Anal infection
20. Gallbladder disease.

Bacillary dysentery, amebiosis, gastrointestinal tuberculosis, sprue, functional diarrhea and cancer of the colon are the diseases which commonly require differentiation. Adequate tests and observation along obvious lines will permit exclusion of each of these.

In the hereditary type of diffuse polyposis, the history may be identical with that of C U C. This is a rare condition in which the entire colon may be studded with multiple adenomas. Young adults or even children are affected. Carcinoma frequently develops and is often multiple. Barium enema and sigmoidoscopy permit accurate differentiation from C U C.

Pathology In most cases, infection is first noticeable in the rectum. Later the infection is descernible in the sigmoid with proximal extension continuing toward the cecum. One or more areas of disease may occur also in the ileum. The principal involvement is in the mucosa. Hyperemia and minute, superficial bleeding ulcerations characterize early changes. Progressive denudation of the friable mucosa and progressive involvement of the deeper layers of the bowel wall occur as the disease advances. Deepening of the ulcers may be locally so marked as to result in perforation of the bowel. Autolysis (digestion by pancreatic secretions), gangrene secondary to thrombosis of local arteries and necrosis following continued smooth muscle spasm have all been suggested as explanations for perforation.

Histologically there is no specific diagnostic appearance. The inflammatory nature of the process is evident by infiltration of the mucosa and one or more of the deeper layers by round cells, plasma cells and polymorphs. Chronicity is characterized by the appearance of fibroblasts and the development of fibrous tissue in all layers of the bowel wall.

In consequence, the colon loses its haustrations and becomes a shortened, narrow tube of lessened capacity.

Pseudopolyps are the islands of mucosa or fibrous tissue between ulcerations. These are common in late stages of recurrent colitis, also abscess. Fistula, and sinus development in relation to the intestine, bladder, vagina or perineum occur in the natural history of the pathologic process.

Complications If anal discomfort, abdominal cramps, foul dysentery (and even fecal incontinence), weakness, nausea and vomiting, anorexia and personality changes constituted the entire syndrome, ulcerative colitis would be a terrible disease. It is worse than that because the following complications frequently occur:

1. polyposis and pseudopolyposis
2. localized colonic and rectal strictures
3. extensive perianal and perirectal infection producing abscesses, sinuses and fistulas
4. malignancy
5. perforation of the bowel
6. massive hemorrhage
7. arthritis
8. skin lesions such as pyoderma gangrenosum and erythema nodosum
9. renal insufficiency and calculus
10. phlebitis.

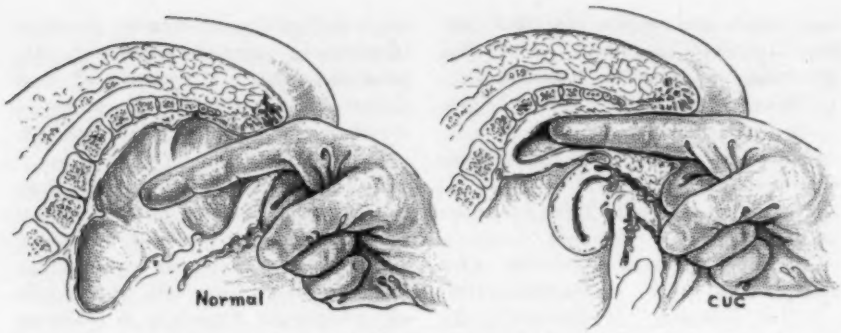


Fig. 2. The narrow rectum in a case of CUC fits the examining finger snugly in comparison to the looseness of the normal rectum around the examining finger (after Drake).

Certain complications may be detected by the employment of a careful follow-up routine. These patients require interval care even when free of symptoms. Polyposis, malignancy, stricture, pseudopolyposis and fistula can be found by x-ray examination. The barium enema should be preceded by proctoscopy. The combined examinations must be done at 6-8 month intervals. The age of onset of the disease, its severity and its duration dictate the proper interval.

Malignancy occurs more often in those with onset of the disease in early life. The usual duration of C U C before discovery of colonic cancer is 10 to 20 years. The incidence of colonic cancer at any age period for C C U patients is many times greater than for the general population. Its development is probably related to the persistent efforts at repair during repeated exacerbations and remissions. Possibly adenoma is the first step and cancer the end result. Polyposis is found in 60% of cases which develop malignant lesions. More than 100 cases have been reported. Recognition depends on alertness. A change in the nature of symptoms, the presence of an abdominal mass, excessive weakness, severe anemia which does not respond to the usual prescription, weight loss or intestinal obstruction; any one of these demands investigation. Most of the cancers will be found on proctoscopy because they occur in the rectum. Proctoscopic examination is a simple procedure which can be done with a minimal investment in equipment. Interpretation of findings is straightforward.

Not all cancers secondary to C U C occur in the rectum. Therefore a barium enema is also indicated. This is a complicated undertaking requiring expensive apparatus and expert interpretation for satisfactory results.

Because ileostomy is utilized in the treatment of several of the major complications, one should give some attention to the care of post-operative ileostomy patients. A temporary bag is used from 1 week to 2 months. Thereupon a permanent bag can be expertly fitted. A skilled technician will teach the patient its use so that the patient promptly finds it tolerable. From that time on, the ileostomy patient is free to do what he pleases and suffers no real inconvenience. The most satisfactory bags are the Davol type, the Travellar or the Koenig-Rutzen. The bag need be changed only twice a day.

Minor complications include hemorrhoids, pruritus and kraurosis ani and club fingers.

Therapy

A. Prevention Nothing would be finer than to establish reliable prophylaxis for

C U C. Prevention is better than cure for any disease but it is particularly desirable for a serious malady which has so long defied the therapeutic skill of our profession. Unfortunately even prophylactic measures are inadequate.

The advice of experts varies. Each advisor suggests preventive measures which correspond with his hypothesis concerning etiology. A single example will suffice. Felsen[13] believes that bacillary dysentery is the precursor of C U C. Therefore if you prevent bacillary dysentery, you do away with C U C.

Good general principles of gastrointestinal hygiene are advisable. Recognition of the mechanics of digestion should lead intelligent people to give proper care to oral hygiene. Thorough mastication requires a clean mouth, free of tender gums, inflammation and ragged or carious or aching teeth. Good dental care includes replacements of missing teeth. When proper mastication is possible, a well-balanced diet is more palatable and practicable. Even with the best of teeth, many individuals swallow food in large chunks. The omission of "mechanical digestion" in the mouth imposes a heavy burden on the stomach and intestines. The palate should function as a watchful inspector who sends back for further processing all but the finest particles of food.

Proper selection of food is a matter of education. The general public has almost no training in this subject and is led this way and that by faddists, newspaper columnists and personal whims. A sound program of food intake should have some name other than "diet", which carries a connotation of therapy or the intention of losing weight. A daily intake with adequate bulk, vitamins and minerals as well as the proper proportion of fats, proteins and carbohydrates is possible for most Americans today. The lack of specific training in this subject and the competition of social and business activities with mealtimes militate against sound practices. Investigation of this subject by interviews with a large number of unselected patients will soon convince any doctor of this truth.

Bowel habits depend upon the training received at home but that training can be greatly affected by the family physician. Unfortunately sufficient attention is not given to advice on the subject. The astonishing volume of annual sales of cathartics tells the story. Our people purge when they should instead be drinking more water and taking more time at the stool. The average adult does not understand the physiology of defecation. He should be taught to seek a definite time of day when he will set aside a half hour for defecation, preferably after a meal. The activities concerned with arising in the morning (or whenever he does arise) and the stimuli of thorough mastication and subsequent entry of food into the stomach evoke a neuromuscular response throughout the colon. Therefore a postcibal visit to the stool is very likely to be effective without the irritating stimulus of catharsis.

Those who smoke may find some value in the use of tobacco after the meal, even while sitting on the stool.* Formation of a regular daily habit is most important in the development of a satisfactory response without straining. Voluntary effort is necessary to initiate evacuation but involuntary muscular contractions in the sigmond and rectum complete the process and defecation is best left to itself. One should plan leisure time to permit this physiologic process. As a result the response will be adequate so that bowel movements will be normal, soft and formed.

To encourage a leisurely attitude at the stool is important. Consequently it is well to inquire about the available facilities and to insist that inadequacies be corrected. You will not succeed in obtaining

*This does not imply advocacy of smoking by C U C patients.

cooperation if the toilet is in a dark, odorous, drafty and unpleasantly damp and dirty condition. The stool should be low enough to permit the individual to assume an almost squatting posture. This may be accentuated with the use of a footstool for short-legged persons.

B. Medical Management Bed rest is the most consistently effective therapeutic agent available for an acute episode of ulcerative colitis. ACTH and Cortisone, to be discussed below, are still but useful adjuncts to a thorough, over-all program of management which includes symptomatic, supportive, chemotherapeutic and surgical measures, as indicated.

First and always, the patient needs assurance. Do not deceive him. You can truthfully state that his bloody diarrhea can be controlled. Convince him that it is unnecessary that he get up to avoid soiling the bed. A good nursing staff or orderly service is absolutely indispensable if a fretful patient, with as many as 20 stools daily, is to be kept clean and to achieve adequate bed rest. An overhead trapeze or sling (on an orthopedic frame) is useful in facilitating the placing and removal of bed pans without exhausting the patient.

Symptomatic Therapy Sedation helps to enforce rest. Barbiturates and bromides are usual. Prolonged use of bromides is not recommended unless occasional laboratory investigation of blood bromide level is employed to avoid bromism and its serious consequences.

Cramps and diarrhea may respond favorably to one of several measures:

1. tincture of belladonna 5-10 minims 3-4 times daily
2. camphorated tincture of opium (paregoric) ½ to 1 dram 3-4 times daily
3. deodorized tincture of opium (laudanum) 5-10 drops 3-4 times daily.

Further aid in achieving control of diarrhea may be sought in drugs designed to add innocuous bulk to the stool:

1. bismuth 4-8 gm. 3-5 times daily
2. tribasic calcium phosphate 4-8 gm. 3-5 times daily
3. very finely divided kaolin (hydrated aluminum silicate) 30-90 gm. 3-5 times daily
4. colloidal aluminum hydroxide 10-20 cc. 4-6 times daily as a liquid, or the dried gel, 0.6 to 2 gm. 4-6 times daily.

Karaya gum preparations are also sometimes useful in removing water from the stool. Carob flour has similar useful properties.

The medicinally increased bulk may not be innocuous. Caking may occur, producing pressure necrosis, bleeding and perforation. Dosage, therefore, varies with the effect of the drug on the individual at any given stage of his disease. Consequently careful supervision of dosage is mandatory. A number of proprietary substances for combatting diarrhea include bismuth, calcium, and aluminum, bulk-producing substances. In addition there are proprietary remedies which contain methylcellulose. It is non-absorbable, white, odorless, tasteless, and water soluble. Marks[24] found that its addition to oral barium mixtures assured passage of the barium through the colon without purgation. Difficulty in attaining complete evacuation of oral barium is well known, and therefore, this achievement with methylcellulose recommends it and the proprietary remedies in which it is contained.

Intestinal unrest may be combatted with atropine sulfate 0.2 to 0.3 mg. 3-4 times daily as a check on vagal stimulation. Papaverine relaxes smooth muscle by direct action and is therefore an intestinal antispasmodic which may be useful in doses of 1½ gr. 3-4 times daily by mouth or ½-1 gr. 3 times daily slowly by vein. Addiction to papaverine has never been reported. Proprietary drugs are available which combine these and other antispasmodics with various adjuvants.

a b

Fig. 3. Proctoscopic appearance of CUC.
a. Pre-ulcerative CUC
b. Granular appearance of the mucosa and ulceration in CUC (after McNett).

Opium should be used sparingly. Powdered extract of opium has salutary effects on the bowel but also on certain emotional depressions accompanying this disease. Recommended dosage is ½ to 1 grain. Addiction is common but there is another contraindication. After a few days' use, opium produces diarrhea apparently by paralyzing intestinal nerve endings so that feces pass through freely.

Use of colonic irrigations for relief of tenesmus and irritation is not justified. There is too much likelihood of producing rather than alleviating irritation.

Because excessive pancreatic secretions are thought to play a possible role in denuding the colonic mucous membrane, drugs are employed to inactivate these enzymes. Sodium alkyl sulfate 200 mg. t.i.d. in enteric coated capsules in one of these.

Maintain the blood sugar at high normal levels. Low blood sugar contributes to feelings of depression. The emotional problems are less difficult when proper physiological balance is maintained.

Supportive Therapy When nausea and intestinal cramps prevent adequate oral intake, phleboclysis, hypodermoclysis or osteoclysis becomes necessary. Fluid and electrolyte balance are further disturbed by bloody diarrhea. Modern laboratory facilities permit frequent checks for carbon dioxide combining power, chlorides, etc. Thereby one is enabled to determine precisely what fluids to administer from time to time. Physiologic saline and 5% glucose are useful for ordinary purposes in supplying fluid. Whole blood is most helpful because of its many important constituents, making it useful against the:

(a) anemia (c) protein loss
(b) toxemia (d) general debility

Multiple small transfusions of 150 to 250 cc. at intervals of 1-3 days appear to be more stimulating and helpful than the same total quantity of blood given at one time.

Liver extract can be valuable. The crude product in doses of 3-5 cc. every 2-3 days by intramuscular injection is recommended. No specific anti-colitis effect has been proven. Vitamin B_{12} is often given with the liver. Ferrous sulfate, which is commonly an intestinal irritant, should be used if it be tolerated. Try various preparations because oftentimes a satisfactory one is found after several others have proven intolerable to a given patient.

Empirical vitamin B therapy is included for treatment of C U C by most centers. It may help in stimulating the appetite. Vitamin A, vitamin C, and prothrombin deficiences are reported as regular occurrences.[32] Peripheral neuritis is sometimes noted, for which doses of thiamine chloride (50 to 150 mg daily) intravenously are useful. Because fruit juices are contraindicated, 200-300 mg. daily of ascorbic acid is given orally for vitamin C deficiency. Loss of dark adaptation may draw attention to vitamin A deficiency. Irregularity of intestinal absorption can be avoided now by using injectable vitamin A. As much as 100,000 units daily of oral vitamin A has been advised. An injectable vitamin A, 50,000 units several times weekly, would probably be as effective. Vitamin K is available for oral and parenteral use. Intravenous menadione 5-10 mg. is suggested for prompt restoration in a patient with massive hemorrhage.

Physical therapy, diet therapy and psy-

chotherapy are all parts of the supportive program.

Sun baths, tepid water baths or sponging, massage and even heat lamp treatments are valuable if received with pleasure by the patient. None of these is to be employed at the expense of essential rest. A clash of personality between patient and physiotherapist is an absolute indication for discontinuance.

Diet Therapy Assuming that the patient is acutely ill with bloody diarrhea and loss of appetite, items from the following basic diet are offered at 2-4 hour intervals:

weak tea	gelatin in water
broth	barley gruel thinned with
bouillon	water
	water at room temperature

These should be used for a few days during which time consideration must be given to the claims of the allergist that C U C is an allergic disease.[1,35] Milk, wheat and eggs are regarded with especial suspicion. A history of allergic manifestations of any sort increases the likelihood that certain foods may act as a trigger mechanism in initiating symptoms.

If allergy appears to be no factor, the diet should be broadened in a few days by the addition of:

toasted white bread	tapioca
cream soups	finely ground meat
soft eggs	sweetbreads
custards	broiled liver

When the bowel is evidently less irritable:

pureed vegetables

baked potato rice

If an allergic diathesis has been suggested by the history, skin tests may be done. Skin tests for food sensitivities are so often misleading that many doctors prefer to employ the Rowe elimination diet or a modification as follows: Add to the basic diet (above) only one new food at a time, testing it for 3-4 days. However, when a new food is added it may be taken as representative of its class. To illustrate, where wheat bread is added, it is representative of wheat. If wheat bread is tolerated, one may safely add other wheat products without testing each individually. Common offending foods are: nuts, pork, honey, sea foods, cheese, chocolate, cocoa, berries, and the big three: milk, wheat and eggs.

Citrus fruits, salads, excessive raw vegetables and fruit juices, bran, ice cold drinks and emphasis on milk products are not recommended. The diet should be gradually expanded, increasing the protein content. The patient without an appetite needs coaxing. To place before him a tray laden with a high caloric, high protein diet is folly itself. Until the appetite returns, 4 to 8 small meals will serve better than 3 large ones. Furthermore, a patient with poor appetite will eat more food if each meal is served in 3 or 4 courses with only one course visible to him at a time. This is more work but is certainly worth it.

Initial parenteral feeding and withholding of food a week at a time provides rest for the overactive intestines. Especially in fulminating ulcerative colitis is this measure significant. Ileostomy can sometimes be avoided by providing rest for the intestines in such fashion.

Psychotherapy Some doctors agree with Bargen[32] that personality problems arise secondary to C U C. Others believe that C U C stems from the observed emotional problems. Both groups will seek to achieve psychic re-orientation by therapeutic measures during medical management of the colitis.

Psychic re-orientation is achieved by a few patients without specific, intentional psychotherapy. Sincere, solicitous care, rest and freedom from business and social stresses sometimes suffice. Deep-seated, complex, emotional patterns will not respond so readily. Where abnormal depression or unshakable fears persist, consultation is as surely indicated as for a complicated surgical problem.

Detailed studies have been done to test

the hypothesis that C U C is produced by psychogenic factors. A dependent personality is considered characteristic. Bargen doubts this. Statistical review of 200 Mayo Clinic cases since 1918 discloses no basis for the current emphasis on emotional disturbance in C U C.[37] When treating colitis patients it is well to consider the possibility that one after another may manifest identical personality disturbances NOT because these people failed to mature normally BUT because C U C refashioned them. Any prolonged, severe, exhausting, dehumanizing disease may leave a similar mark on its victims. The need for kindly understanding and persistent, good-natured encouragement is greater than the need for specialized psychiatric therapy. New limitations are imposed by the disease. These are usually less restrictive than the patient fears. Teach him to accept his limitations. Send him back into life's activities without fear. If this can be done, the personality problem will usually be overcome without additional psychotherapy.

C. Chemotherapy There was a time when sulfonamides were hailed as a cure for C U C. Neither chemotherapeutic nor antibiotic agents have proved to be specific for this disease.

When fever, leukocytosis and increased sedimentation rate signalize infection of systemic character, the use of sulfonamides or antibiotics is justified. The very erratic course of C U C hampers proper evaluation of such therapy. Careful studies demonstrate the regular development of resistant bacterial strains following the use of sulfonamides, streptomycin, penicillin, chloramphenicol and aureomycin. Therefore it is important NOT to use these agents except for definite evidence of systemic infection* and infectious complications. Pyoderma gangrenosum is a complication which justifies employment of these agents. Where they are employed, the duration of administration must be as brief as possible:

Fig. 4. Section of the colon showing the ulcers separated by bridges of mucosa in a case of CUC (after Boyd).

(a) sulfonamides and penicillin reduce aerobic bacteria in the colon for 6 weeks. By that time the resistant strains have developed and the count returns to pre-therapy levels;

(b) oral streptomycin (1-2 gm. daily) similarly reduces the bacterial count but only for 7 days;

(c) oral aureomycin (1-2 gm. daily) reduces anaerobic bacteria for 3-10 days and, aerobic bacteria for 8-10 days only.

Nisulfazole has received much favorable comment. Swigert[39] recommends it if there be no sign of sensitivity to sulfonamides. There is a suggestion that the efficacy of Nisulfazole is due to its ability to inactivate lysozyme.[39, 39] Sulfadiazine with alkali, sulfaguanidine, Sulfathalidine and Sulfasuxidine are most often used. The last three are less toxic because only slightly absorbable. Bargen found salazopyrin a valuable adjunct in colitis therapy.[48]

Use of sulfonamide drugs by retention enema is probably unjustified. The local irritation produced as well as the psychic effects of concentrating attention on the rectum, and increasing discomfort locally, militate against this practice. Advocates of such therapy claim particular benefit when the disease is confined to the rectum and sigmoid.

Aureomycin should be used preoperatively. If surgical intervention seems likely, do not risk the development of resistant strains by disadvantageously

early use of aureomycin. Confine therapy to the three days immediately preceding surgery. After eight days, resistant strains have developed and the actual bacterial count is greater than without aureomycin. This phenomenon is possibly due to the use by the bacteria of aureomycin as a growth factor!

D. Surgery One unquestionable indication for surgery in C U C is the appearance of carcinoma as a complication. Polyposis, obstruction and perforation are other acceptable indications. Anorectal problems such as abscess and fistula demand surgical attention.

Debatable indications have caused great controversy for years. Advocates of ileostomy, colectomy, combined operations or vagotomy have waxed enthusiastic and later become silent or have even retracted former conclusions. Open warfare has existed between advocates of surgical vs. medical management. Of course, there is no such thing as purely surgical management but there is such a thing as purely medical management. Hemorrhage has been suggested as an indication for surgery. Snorf[38] had two teen-age patients with repeated hemorrhages of apparently equal severity. An ileostomy in the first (Case VI) was followed by colectomy and slow but definite improvement. Surgery was considered for (Case VII) the second, to bring relief from severe hemorrhages. However, despite the patient's critical condition, psychotherapy was utilized to the exclusion of surgery. Dramatic recovery ensued. A follow-up of 6 years revealed no further difficulty. For massive hemorrhage from the sigmoid or rectum, the following mixture has sometimes been suc-

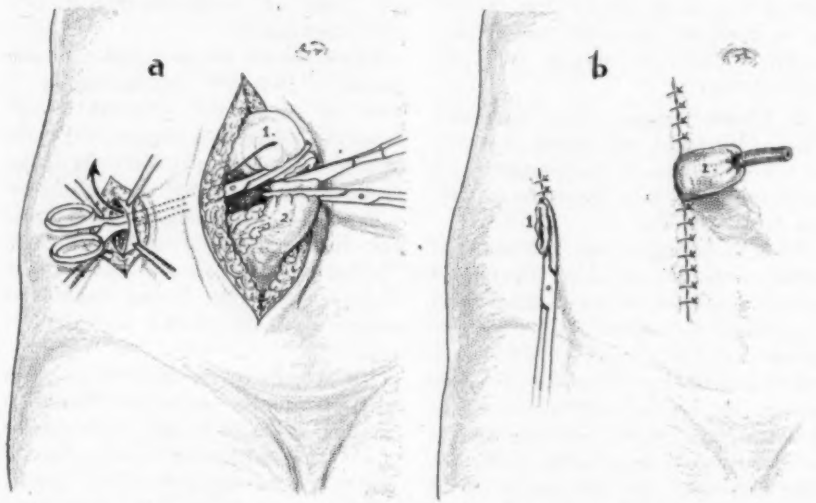


Fig. 5. Terminal ileostomy with implantation of the proximal and distal ileal limbs into separate incisions (after Lahey).

a. Method used to draw the distal limb into the stab incision.

b. Appearance of the completed operation.

1. The skin edges surrounding the distal limb are approximated with one or two interrupted sutures. The clamp is left in situ for about four days until the gut becomes firmly adherent to the abdominal wall.
2. For the first week drainage is maintained through a tube. After the first week the intestine is allowed to discharge into a specially fitted ileostomy bag.

cessfully employed per rectum: 3-4 oz. starch as a thin paste with warm water to which 1 grain of powdered opium is added.

Besides hemorrhage, there are the following debatable indications for surgery:

(1) chronic constitutional and visceral changes,

(2) increasing incapacity and invalidism despite thoroughgoing medical management,

(3) fulminating ulcerative colitis.

Before surgery is undertaken, the consulting surgeon and the internist should jointly decide upon a program for adequate investigation of the case. In other words, both men should be satisfied and *jointly responsible* that everything proper has been done to achieve success by non-surgical means. This includes study of the role of infectious agents, allergens and emotional problems. The role of secondary disturbances in physiology, such as achlorhydria, should be clarified. Failure to investigate properly does result in unnecessary surgical intervention. Posey's study[32] of metabolic derangements in C U C details a number of avenues for additional therapeutic efforts, short of surgery.

There are patients whose severe toxicity, high fever, cramping abdominal pain and profuse, bloody, mucopurulent stools suggest the necessity of an immediate, radical procedure. Ileostomy has sometimes provided dramatic relief for such examples of fulminating ulcerative colitis. Emergency ileostomy should be done with as little disturbance as possible to the colon. Therefore a loop ileostomy is indicated rather than a divided ileostomy. This avoids dissemination of organisms from manipulation of the colon. The tendency in recent years has been for earlier and more frequent surgical intervention. Improvements in technique and better management before, during and after surgery have nevertheless increased the salvage rate.

The surgical procedures employed are temporary or permanent ileostomy alone or combined with partial or total colectomy. Colectomy is often done in stages and it is always safer if preceded by ileostomy. The recent trend is toward complete colectomy. Partial colectomy is based on the premise that preoperative studies (clinical, radiographic and sigmoidoscopic) and surgical inspection permit accurate estimation of the extent of involvement of the colon. Experience has shown, however, that either the involvement exceeded the estimation or additional segments subsequently became involved. Total colectomy is therefore more popular than hitherto.

Early colectomy is furthermore advocated by some who believe that removal of the diseased colon will check the progress of the disease and prevent widespread systemic manifestations. Colectomy is credited with the prevention of complications such as arthritis and phlebitis. Certainly it makes impossible the development of complications which otherwise may appear in the colon: polyposis, stricture and malignancy.

Surgical procedures still carry a risk which must not be disregarded. Essential surgery must not be delayed until that risk has been further increased by the hopelessness of the patient's condition. Nevertheless the indications should be definite. Lack of the courage and skill which is necessary for successful medical management in the face of severe involvement by C U C has too often been the chief indication for surgery.

E. ACTH and Cortisone The prompt subsidence of symptoms in several dozen C U C patients treated with ACTH[20] justifies a measure of optimism in the concluding paragraphs of this discussion of treatment. Kirsner[19] has tried both Cortisone and ACTH. His results with ACTH surpassed the good effects of Cortisone. Control injections with sterile water failed to produce similar effects. In this way, the

possibility of a purely psychic response was tested. Both compounds were found useful. Occasionally dramatic favorable responses were obtained.

Similar experiences[9, 11, 21, 28] of other observers merely indicate the probability that adrenocortical substances may assist in the medical management of the disease. A more suggestive report is that of Posey and Bargen.[32] The widespread metabolic disturbances which they found in 44 C U C patients include definite evidence of impairment of adrenocortical reserves, decreased urinary 17 ketosteroids and the presence of abnormal corticosteroids.

Although the employment of ACTH and Cortisone for the treatment of C U C is still in the developmental stage, the use of these agents is certainly justified in a severely ill patient for whom emergency surgery is the only alternative.

Living with CUC Seek a propitious occasion to spend a lot of time with the patient so as to discuss the true nature of his malady in a leisurely fashion. Dispel his fears of the unknown. Encourage the acceptance of a life-long regimen by which the disease can be controlled rather than a pharmaceutical or chirurgical miracle by which the disease might be "cured." There will always be a tendency for symptoms to recur. Therefore the patient must be taught to accept his limitations in the same way as a diabetic. Specifically this applies to food and bowel habits. The disease can be brought under control so that it is not dangerous to life. In fortunate cases, prolonged remissions are achieved so that the discomfort and misery of diarrhea may be relegated to the past history.

Prolonged interviews may be required depending on the insight the patient has of his disease, his physical and his mental environment. Resentment toward his disease must be overcome principally through your efforts.

The colon-conscious individual who has taken laxatives for many years finds it difficult to think in terms of normal bowel habits unassisted by laxatives. There are such individuals even among victims of C U C. Re-education is necessary so that they will never habitually irritate the bowel with purgatives of any kind. Enemas are likewise contraindicated and there are some patients who must be weaned away from them. To such individuals, one or multiple daily evacuations are an obsession. When a remission of symptoms of C U C is achieved, the obsession, rooted in concepts antedating the colitis, promptly recaptures the mind and old habits of purgation or irrigation may be resumed unless careful prohibitous have been convincingly made by a trusted physician.

Some patients will go to the ends of the earth in search of relief. They complain. They sacrifice time, money, and worldly possessions in their search for a cure. They will not, however, accept dietary advice from anybody. Adherence to a sound dietary practice is an essential for innumerable patients who cannot otherwise enjoy a prolonged remission.

Preoccupation with interesting people, things and activities is beneficial. Idleness is contraindicated. Living at peace with C U C requires the development of absorbing interests. The more discomfort suffered, the more interesting must be the work or hobbies so that peace of mind may be attained. Nothing in the foregoing remarks should be interpreted to apply during an acute bout of colitis. At such a time, complete bed rest is required and the avoidance of all unnecessary effort should be enforced.

When surgical measures are undertaken, the patient needs mental preparation. Only rarely is it necessary to proceed at such short notice that elaborate discussion may not be permissible. When an ileostomy is performed, the patient may react in several ways. To assure a favorable reaction, it is desirable to locate a well-adjusted, happy, satisfied post-ileostomy patient with whom your new case may converse. There is no more convincing

argument. There is no better preparation than a discussion with a well-adjusted post-ileostomy patient. You can tell the patient that 70% of postoperative ileostomy cases return to fulltime gainful employment at their previous occupation. The flat bag, glued to the skin with liquid latex, does not leak. Therefore full participation in any social or athletic activity is possible.

Kirsner and associates report increasingly effective responses of patients to subsequent attacks of colitis when such patients deal successfully with the first attack. Early recognition of this disease is therefore important so that an effective program of management may be instituted to help the patient to deal successfully with the initial attack. That program for initial control includes prolonged bed rest, sedation, restoration of nutrition, control of infection and preparation for the lifelong road ahead. Teach the patient to live in harmony with his disease. With good gastro-intestinal hygiene a kind of immunity or resistance develops so that subsequent attacks are less severe.

There is more still that you must do. The patient should be taught to accept permanent medical supervision. He should submit himself for periodic checkups. Careful investigation is made for foci of infection on the theory that their presence may lower resistance and invite exacerbations. Surgical procedures for removal of infected tonsils, gallbladder, etc. should be undertaken only during a stage of remission or quiescence.

Periodic proctoscopic and roentgenoscopic examinations will enable you to keep properly informed on the activity of the disease even in the absence of symptoms. By this means you are enabled to caution the overenthusiastic patient who is too ready to misinterpret a prolonged remission as a cure. By this means you may recognize the development of such complications as polyps or malignancy.

References

1. Andresen, A. F. R. The ulcerative colitis problem, N.Y. State J. Med. 1949, 49:1783.
2. Bargen, J. Arnold, Jackman, R. J., Kerr, J. G. Studies on the life histories of patients with chronic ulcerative colitis (Thrombo-ulcerative colitis), with some suggestions for therapy, Ann. Int. Med. 1938, 12:399-52.
3. Bargen, J. Arnold. The modern management of colitis, Baltimore, C. C. Thomas, 1943, 322 pages.
4. Buie, L. A., Bargen, J.A. Chronic ulcerative colitis, a disease of systemic origin J.A.M.A. 1933, 101: 1462.
4a. Bargen, J. Arnold, Treatment of Ulcerative Colitis with Salicylazosulfapyridine (Salazopyrin). Med. Clin. N. Amer. 1949 (July) 935-42.
5. de Castro Barboso, J., Bargen, J. A., Dixon, C. F., Regional segmental colitis Surg. Clin. N. Amer. 1945 25:939-68.
6. Cattell, R. B., Care of Ileostomy, Lahey Clin. Bull. 1944, 4:45-52.
7. Cattell, R. B., Sachs, Ernest Jr., Surg. treatment of ulcerative colitis, J.A.M.A. 1948, 137:929-35.
8. Dearing, W. H., Brown, P. W. Cortisone and ACTH in chronic ulcerative colitis, Proc. Mayo Clin. 1950, 25:486-8.
9. Dennis, Clarence, Eddy, F. D., Westover, Darrell, Vagotomy in the treatment of idiopathic ulcerative colitis and regional enteritis, Minn. Med. 1948, 31:253.
10. Dragstedt, L. R., Dack, G. M., Kirsner, J. B. Chronic ulcerative colitis: a summary of evidence implicating bacterium necrophorum as an etiologic agent. Ann. Surg. 1941, 114:653.
11. Du Toit, C. H., Bauer, Walter, The effect of ACTH on ulcerative colitis. Proceedings of the 1st clinical ACTH conference (J. R. Mote, Ed.) Phil., Blakiston, 1950: pages 459-68.
12. Fansler, W. A., Frykman, H. M. Surgical treatment of non-specific ulcerative colitis, American J. Surg. 1948, 76:713-22.
13. Felsen, J. Bacillary dysentery, colitis and enteritis, Phil. W. B. Saunders 1945.
14. Ginsberg, R. S., Ivy, A. C., The Etiology of Ulcerative Colitis: An analytic review of the literature. Gastroenterology 1946, 7:67.
15. Grace, W. J., Wolf, S., Wolff, H. G., Life situations, emotions and chronic ulcerative colitis, J.A.M.A. 1950, 142:1044.
16. Haskell, Benjamin, Friedman, M. H. F., One years treatment of non-specific ulcerative colitis with intestinal extract Amer J Surg 1948, 76:709-12
17. Kalil, T. H., Robbins, L. L., Early roentgenologic changes in idiopathic ulcerative colitis, Radiology, 1949, 53:1-10
17a. Kaliski, S. R. and Mitchell, D. D., Treatment of diarrhea with carob flour, Texas State Med. J. 1950, 46:675.
18. Kirsner, J. B., Palmer, W. L., Mainion, S. N. Ricketts, W. E., Non-specific ulcerative colitis, J.A.M.A. 1948, 137:522-9.
19. Kirsner, J. B., Palmer, W. L., Klatz, A. P. ACTH and Cortisone in chronic ulcerative colitis: a comparison of clinical effects. J. Lab and Clin. Med. 1950 36:846.
20. Kirsner, J. B., Palmer, W. L., Klatz, A. P., Reversibility in ulcerative colitis, Radiology 1951, 57: 1-14.

21. Machella, T. E., Hollan, O. R., The effect of cortisone on the clinical course of chronic regional enteritis and chronic idiopathic ulcerative colitis. Amer. J. Med. Sc. 1951, 221:501-7.
22. Mackie, T., Ulcerative colitis, a med. and surg. problem, J. Kans. Med. Soc. 1949, 50:473.
23. Marks, J. A., Wright, L. T., Strax, S., Treatment of chronic non-specific ulcerative colitis with aureomycin. A preliminary report. Amer. J. Med. 1949, 7:180.
24. Marks, M. M., Barium modification with methocel, Amer. J. Surg. 1951, 81:6-9.
25. Marks, M. M., Barium modification with methcel in the diag. of bowel lesions, International College Surg. 1951, 15:143-6.
26. Marshall, H. C., Palmer, W. L., Kirsner, J. B., The variable effects of sulfonamides on fecal bacteria in patient with chronic ulcerative colitis, Gastroenterology 1948, 10:46.
27. Marshall, H. C., Kirsner, J. B., Palmer, W. L. Chemotherapy in Chronic ulercative colitis, Med. Clin. N. Amer. 1951 (Jan.) 257-66.
28. McKill, T. E., Tuthill, S. W., Sullivan, A. J. The affective response of a patient with chronic ulcerative colitis to Cortisone, Gastroenterology 1951, 17: 1-24.
29. Meyer, Karl, Gellhorn, Alfred, Prudden, John, Lehman, W. L., Steinberg, Anita Lysozyme activity in ulcerative alimentary disease. Amer. J. Med. 1948, 5:482-502.
30. Parsons, Usher, A lecture on the connection and reciprocal influence between the brain and the stomach. Providence, 1841.
31. Paulson, M., The present status of idiopathic ulcerative colitis, J.A.M.A. 1933, 101:1687.
32. Posey, E. L., Bargen, J. A., Metabolic derangements in chronic ulcerative colitis Gastroenterology 1950, 16:39-50.
33. Renshaw, R. J. F., Brownell, T. S., Cleveland Clin. Quart. 1945 12:123-7.
34. Ricketts, W. E., Kirsner, J. B., Palmer, W. L. Chronic non-specific ulcerative colitis, Gastroenterology 1948, 10:1-15.
35. Rowe, A. H., Chronic ulcerative colitis — an allergic disease. Ann. Allergy 1949, 7:727.
36. Sauer, W. G., Bargen, J. A., Chronic ulcerative colitis and carcinoma, J.A.M.A. 1949, 141:982-6.
37. Sloan, W. P. Jr., Bargen, J. A., Gage, R. P. Life histories of patients with chronic ulcerative colitis: a review of 2000 cases. Gastroenterology 1950 16:25-38.
38. Snorf, L. D., Chronic ulcerative colitis, Med. Clin. N. Amer. 1951 (Jan.) 243-55.
39. Swigart, W. B., Chronic ulcerative colitis. Recent concepts of etiology and therapy J. Internat. Coll. Surg. 1950 14:714-20.
40. Thorlakson, P. H. T., Chronic ulcerative colitis, J. Internat. Coll. Surg. 1949, 12:439.
41. Veegens, D., De sympathia inter ventriculum et caput, praecipue in statu praeternaturali, Leyden, Edinburg, 1784.
42. Wightman, C. De consensu ventriculum inter et cerebrum 1808.
43. Wolf, Stewart, Wolff, H. G., Human gastric function, N. Y., Oxford U. Press 1943, 195 pages.

Triethylene Melamine in Neoplastic Diseases

Triethylene melamine was administered intravenously in a dose of 2 to 3 mg. daily to patients with Hodgkin's disease, lymphosarcoma, and chronic lymphatic and myelogenous leukemia. The total dose for adults ranged from 5 to 20 mg. Temporary improvement, similar to that effected by the nitrogen mustards, was achieved. Karnofsky *et al.* pointed out in *A.M.A. Arch. Int. Med.* [*87*:477 (Apr. 1951)] that both triethylene melamine and methyl-bis (2-chloroethyl) amine are limited in their usefulness by the fact that they are injurious to the normal hemopoietic function. It is essential that the dosage be carefully regulated in order to prevent prolonged or fatal depression of the bone marrow. It was also reported that triethylene melamine, in usual doses, rarely causes nausea, vomiting, or venous thrombosis, in contrast to the nitrogen mustards.

PVP to Maintain Blood Pressure in Shock

Polyvinyl pyrrolidone was administered alone to 18 patients and to 19 patients followed by the administration of whole blood in order to maintain blood pressure during major operations or for acute injuries. PVP was administered as a 3.5 per cent solution in an average volume of 600 cc., according to a report by Arden, Mandow, and Stoneham in *The Lancet* [*1*:1098 (1951)]. The authors found that PVP maintained the blood pressure satisfactorily in most patients and that in a few cases the blood pressure rose. Practically all of the patients would have required intravenous therapy with plasma or whole blood. There was no interference with wound healing except for the presence of a hematoma in a few cases. There were no ill effects from the combination of PVP followed by whole blood and 2 Gm. of procaine administered with 500 cc. of PVP likewise gave no evidence of ill effects.

Hypochromic Anemia in the Aged

MAURICE M. RATH, Ph.D., M.D.,
East Orange, N. J.

The occurrence of anemia in clinical medicine is common. In a recent study[1] of 25,000 routine inpatient and outpatient admissions, an anemia of clinical significance was found in 1 of every 8 patients (12%). Of these, 41% was a normocytic, normochromic type and 39% was a microcytic anemia. In the aged, hypochromic anemia is the most common type encountered.[2, 3]

The literature describing the management of nutritional hypochromic anemia is controversial. Some authorities[4, 5] state that iron in sufficient dosage is all that is required for the correction of this form of anemia, and that there is no convincing evidence that the addition of other nutritional factors will bring about more rapid or more complete recovery than the administration of iron alone.

Heath[6], however, points out that it is probable that inadequate dietary intake of iron, in and by itself, never results directly in iron deficiency anemia. Dameshek[7] has stated that the vitamin B complex is probably an essential element in normal hematopoiesis. Cartwright[8], in an extensive review of the literature containing many references, concluded that it has now been definitely shown that riboflavin, nicotinic acid, pyridoxine and folic acid are important for red blood cell formation, and that it has been conclusively shown that the scorbutic state in animals as well as in human beings is frequently accompanied by anemia.

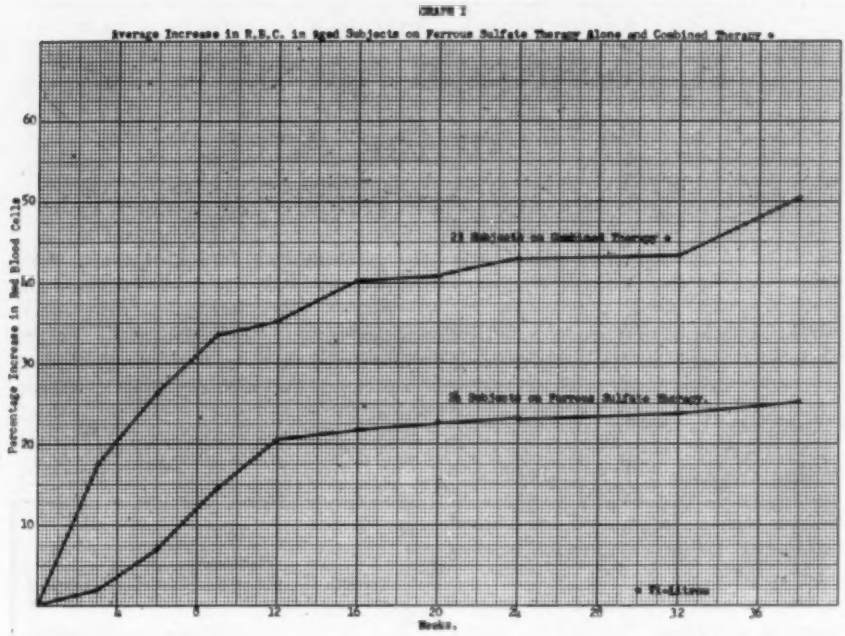
Minot[9] in 1935 pointed out that "iron alone cannot make hemoglobin or red blood cells, and that there are other blood building factors that may be deficient, particularly when 'iron' deficiency exists." Many other clinical reports indicate the

TABLE I

Comparison of Average Response to Combined Therapy and Therapy with Ferrous Sulfate Alone

	Red Blood Cells In Millions	Hemoglobin Grams*	Hemoglobin %
Before Medication			
Combined Therapy**	3.20	9.2	59.0
Ferrous Sulfate***	3.42	9.5	60.9
3 weeks			
Combined Therapy	3.76	10.0	64.1
Ferrous Sulfate	3.49	9.8	62.9
6 weeks			
Combined Therapy	4.04	10.7	69.2
Ferrous Sulfate	3.65	10.2	65.3
9 weeks			
Combined Therapy	4.27	10.9	70.0
Ferrous Sulfate	3.91	10.4	66.6
12 weeks			
Combined Therapy	4.33	10.9	70.0
Ferrous Sulfate	4.12	10.5	67.3
16 weeks			
Combined Therapy	4.49	11.3	72.4
Ferrous Sulfate	4.17	10.8	69.2
20 weeks			
Combined Therapy	4.51	11.6	74.3
Ferrous Sulfate	4.19	11.0	70.5
24 weeks			
Combined Therapy	4.57	11.9	76.9
Ferrous Sulfate	4.21	10.9	70.0
32 weeks			
Combined Therapy	4.60	12.5	80.1
Ferrous Sulfate	4.23	11.1	71.9
38 weeks			
Combined Therapy	4.81	12.9	82.7
Ferrous Sulfate	4.28	11.5	73.7

* 15.6 grams equivalent to 100 per cent.
** Combined therapy consisted of one capsule three times daily of Vi-Litron, each capsule containing 195 mg. (3 grains) ferrous sulfate, 20 mg. ascorbic acid, 2 mg. thiamin, 2 mg. riboflavin, 10 mg. niacinamide, 1 mg. d-calcium pantothenate, 218 mg. liver fraction (derived from 12 grams of liver).
*** One tablet containing 300 mg. (5 grains) of ferrous sulfate, three times daily.



desirability of combining iron with liver and vitamin B complex[10, 11, 12, 13, 14] and ascorbic acid[15, 16, 17] for more effectively combatting hypochromic microcytic anemia.

Purpose This study was made to compare the hematological response evoked by iron alone with that produced by iron combined with liver, members of the B complex and ascorbic acid.

From a total of 172 subjects residing in a home for the aged, 47 having hemoglobin values of less than 12.4 grams per 100 cc (80%) and red cell counts of less than 4,000,000 per cu. mm. were chosen for this investigation. These subjects (ranging in age from 65 to 90 years) were divided into two groups, each group containing about equal numbers of both sexes. A capsule* containing 195 mg. (3 grains) ferrous sulfate, 20 mg. ascorbic acid, 2 mg. thiamin, 2 mg. riboflavin, 10 mg. niacinamide, 1 mg. d-calcium pantothenate, and 218 mg. liver fraction (derived from 12 grams of liver) was given three times daily to twenty-three patients in Group I.

To twenty-four subjects in Group II. one enteric-coated tablet containing five grains (300 mg.) of ferrous sulfate was given three times daily.

Red cell counts and hemoglobin levels were determined before commencement of treatment, and at 3 to 8 week intervals during treatment for a period of 38 weeks.

Results Table I shows the average red cell counts and hemoglobin values before and during treatment with ferrous sulfate combined with liver, vitamin B complex and ascorbic acid (Group I), and with ferrous sulfate alone (Group II). It will be noted that in Group I, after three weeks of treatment, there was

*VI-LITRON, a product of U. S. Vitamin Corporation, New York, was used for this purpose and supplied through the courtesy of Dr. L. Freedman, Vice-President and Research Director.

an average increase of 560,000 R.B.C. per cu. mm. and 0.8 gm. hemoglobin per 100 cc. in contrast to 70,000 R.B.C. and 0.3 gm. hemoglobin in Group II. This difference in hematopoietic response was maintained throughout the study, although there was a leveling off of rate of increases in both groups in the second half of the study period. Tables II and III and Graphs I and II illustrate more clearly the relative efficacy of the two types of treatment.

Discussion The subjects serving in this study ranged from 65 to 90 years of age. All were given the same daily diet, which was considered representative of the average American diet, except perhaps lower in protein. It may be for the latter reason that the rise in hemoglobin in both treated groups lagged behind the rise in red cells. Impairment of mastication, absorption and utilization of protein, lack of interest in food, or perhaps depressed hematopoietic organs of the aged may be other reasons for this lag.

The subjects receiving iron with liver, B complex and ascorbic acid improved subjectively and objectively to a greater degree than those given iron alone. Increase in appetite, decrease in nervous irritability, headaches, fatigue, and difficulty in sleeping were more often reported in the former group. This greater improvement in well-being of the subjects may have resulted from the addition to the diet of nutritional factors (other than iron) in which the aged are commonly deficient, as well as from the more rapid and greater hematological response effected by the more complete therapy. Indeed, a good number of the geriatric patients showed avitaminotic lesions such as cheilosis, glossitis, angular stomatitis, dyssebacea, and magenta tongue which markedly improved after the administration of iron together with

GRAPH II

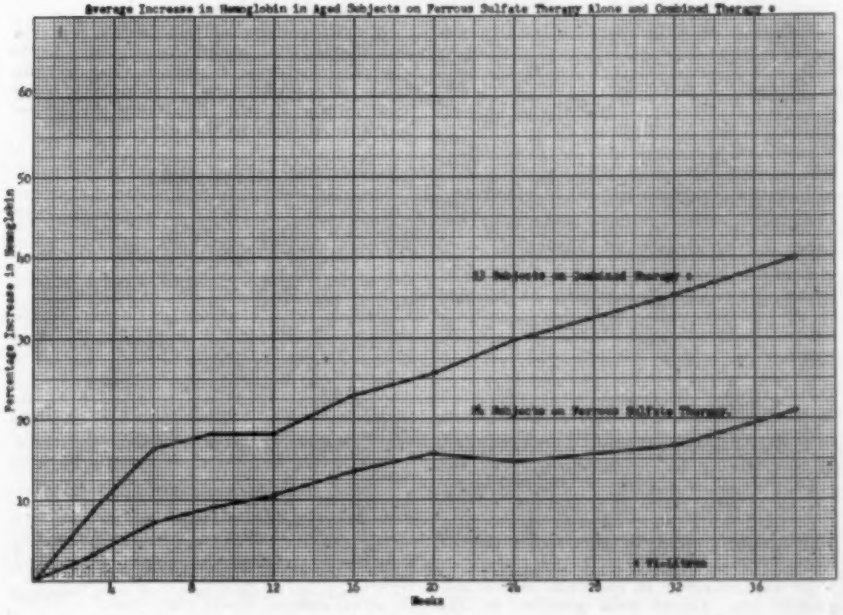


TABLE II

Comparative Increase in Red Cell Counts in Subjects Treated with Combined Therapy and Ferrous Sulfate Alone

	COMBINED THERAPY		FERROUS SULFATE	
Weeks	Average Increase in RBC	% Increase	Average Increase in RBC	% Increase
3	0.56 million	17.5	0.07 million	2.0
6	0.84	26.2	0.23	6.7
9	1.07	33.4	0.49	14.3
12	1.13	35.3	0.70	20.4
16	1.29	40.3	0.75	21.9
20	1.31	40.9	0.77	22.5
24	1.37	42.8	0.79	23.1
32	1.40	43.7	0.81	23.7
38	1.61	50.3	0.86	25.4

TABLE III

Comparative Increase in Hemoglobin in Subjects Treated with Combined Therapy and Ferrous Sulfate Alone

	COMBINED THERAPY		FERROUS SULFATE	
Weeks	Average Increase in Hb	% Increase	Average Increase in Hb	% Increase
3	0.8 gms.	8.6	0.3 gms.	3.2
6	1.5	16.3	0.7	7.3
9	1.7	18.4	0.9	9.3
12	1.7	18.4	1.0	10.5
16	2.1	22.8	1.3	13.6
20	2.4	26.0	1.5	15.7
24	2.7	29.3	1.4	14.9
32	3.3	35.9	1.6	16.8
38	3.7	40.2	2.0	21.0

liver, vitamin B complex and ascorbic acid described above.

Others[2, 3, 18, 19], interested in the care of the geriatric patient report that anemia is very common in elderly persons, and that varying grades of vitamin deficiency can be assumed to be the rule rather than the exception. It has been demonstrated that liberal additions of vitamin B complex and ascorbic acid to the dietary of older persons greatly improves general vitality and vigor[19], and as Stieglitz[18], referring to the aged patient, states, "Rarely is the diet so specifically asymmetric that there is a gross and conspicuous deficiency of one item without depletion of the other elements." The same writer[18] maintains that "Because of difficulties in absorption and utilization, it is felt that the usual normal intake (of vitamins) can well be doubled for those in later maturity or in actual senility."

Summary and Conclusion

1. Forty-seven subjects, 65 to 90 years of age, living in an institution for the aged, served in a study to determine the effects of iron alone as compared to iron combined with liver, vitamin B complex and ascorbic acid in the treatment of hypochromic anemia.

2. The increase in red cells and hemoglobin was faster and greater in the groups receiving combined therapy than in the groups taking iron alone.

3. In six weeks there was an average rise in red cells (26.2 per cent over original average level) in the groups on iron combined with other nutrients, whereas the iron-alone treated groups did not show an equal increment until thirty-eight weeks.

4. In nine weeks the increase in hemoglobin on combined therapy was as great as that obtained in thirty-two weeks on ferrous sulfate alone.

5. The results of this study confirm the findings of other investigators as to the superiority of a combination of iron, liver, B complex and ascorbic acid over iron alone in the treatment of hypochromic anemia in the aged.

References

1. Sturgis, C. C. Advances In Our Knowledge Concerning Etiology and Treatment of Hemotological Disorders. Bull. New York Acad. Med. 25:85 (1949).
2. Stieglitz, E. J. Geriatric Medicine, W. B. Saunders. Phil. 1943.
3. Wintrobe, M. M. Clinical Hematology, Lea and Febiger, Phil. 1946.
4. Barker, W. H. Rational Treatment of Anemia, South Med. J. 41:475 (1948).
5. Sturgis, C. C. Diagnosis and Treatment of the Anemias. Postgrad. Med. 3:41 (1948).
6. Heath, C. W. Handbook of Nutrition: VII. Iron in Nutrition. J.A.M.A. 120:366 (1942).
7. Dameshek, W. Physiologic Principles in the Treatment of Anemia. New Eng. J. Med. 217:815 (1937).
8. Cartwright, G. E. Dietary Factors in Erythropoiesis, Blood, The Journal of Hematology. 2:111 (1947).
9. Minot, G. R. Anemias of Nutritional Deficiency. J.A.M.A. 105:1176 (1935).
10. Goldstein, H. The Use of Iron and Iron Catalysts in Simple Anemia of Children. Arch. Pediat. 52:234 (1935).
11. Cairns, E. Second Year Anemia. Canad. M.A.J. 48:132 (1943).
12. Minot, G. R. Development of Liver Therapy in Pernicious Anemia. Lancet 1:361 (1935).

13. Keefer, C. S. and Chi-Shih Yang. Treatment for Secondary Anemia: A Study of the Results in 126 Cases. Arch. Int. Med. 48:537 (1931).
14. Editorial. Nutritional Anemias in Children. J.A.M.A. 130:212 (1946).
15. Kracke, R. R. Diseases of the Blood and Atlas of Hematology. J. B. Lippincott Co., Phila. 1941.
16. Vilter, R. W., Woolford, R. M., and Spies, T. D. Severe Scurvy: Clinical and Hematological Study. J. Lab. and Clin. Med. 31:609 (1946).
17. Poncher, H. G. Treatment of Anemias in Infancy and Childhood. J.A.M.A. 134:1003 (1947).
18. Stieglitz, E. J. Nutrition Problems of Geriatric Medicine. J.A.M.A. 142:1071 (1950).
19. Stephenson, W., Penton, C., and Korenchevsky, V. Some Effects of Vitamin B and C on Senile Patients. Brit. Med. J. 2:839 (1941).

140 Fourth Avenue

Hormone Ointment in Acne

A cream containing diethylstilbestrol dilaurate was applied in a thin film over the entire face of 36 adolescent boys with acne each morning, following a thorough washing of the face with hot water and soap. Relief was obtained by 33 of the 36 boys, but when the treatment was applied to 48 girls with a similar condition only 3 were relieved. Philip reported in *N. Y. St. J. Med.* [*51*:1313 (1951)] that all of the patients upon whom this treatment was employed had failed to be improved by other types of treatment including X-ray therapy.

Therapeutic Effect of Thiosemicarbazones on Experimental Corneal Tuberculosis

The experimental production of corneal lesions in the eyes of mice has been shown by Rees and Robson to be an effective screening method for the evaluation of the chemotherapeutic effect of agents upon *Mycobacterium tuberculosis in vivo*. The incubation period and the characteristics of the lesion are used as the basis of assessment.

In a study reported in *Brit. J. Pharmacol.* [*6*:83 (Mar. 1951)] the authors found that the incubation period with 4-ethylsulphonylbenzaldehyde thiosemicarbazone was extended from a mean of 13.3 days in the untreated control group to 43.8 days when treated for a standard period of 28 days with 0.085 per cent of the thiosemicarbazone in the diet. Since the corneal lesion developed 15.8 days after treatment was discontinued, the authors concluded that the action of the thiosemicarbazone was bacteriostatic.

A combination of 2 per cent *p*-aminosalicylic acid in the diet with the thiosemicarbazone did not produce any prolongation of effect. When 2 mg. of streptomycin was given subcutaneously night and morning along with the thiosemicarbazone, a distinctly additive effect was obtained. Of 10 mice treated wtih the latter combined therapy 1 developed an atypical lesion on the 46th day and 2 developed typical lesions on the 49th day of incubation but the remaining 7 showed no signs of corneal lesions when the experimental period was terminated 168 days following inoculation.

Chemotherapy in Cholera

Sulfaguanidine, formosulfathiazole, and formosulfacetamide were given in rotation to a series of 268 patients with cholera. The drugs were given in an initial dose of 4 Gm. followed by 2 Gm. every 4 hours night and day until symptoms subsided or until the stools were free of *Vibrio cholerae*. Adjuvant treatment such as intravenous saline, glucose, and gelatin solution, atropine sulfate, nikethamide, and theophylline was given as necessary.

Writing in *Brit. Med. J.* [No. 4705:500 (Mar. 10, 1951)], Lahiri stated that no benefit was noted in the patients receiving the sulfonamides. In fact, the mortality rate was higher among those receiving the sulfonamides, possibly because of the additional burden upon an already dysfunctioning excretory system. Any chemotherapeutic agent must be very fast acting to be of value in the treatment of cholera because of the rapid onset of the disease and the profuse vomiting and diarrhea accompanying it.

Male Senility

Report of a Series of 237 Cases Using Glukor* The New Fortified Pituitary Gonadotrophin

WILLIAM L. GOULD, M.D.†
Albany, N. Y.

IRVING STROSBERG, M.D.‡
Troy, N. Y.

Why do we grow old? This intriguing question has challenged us throughout the centuries. Ponce de Leon thought he solved the problem with his "fountain of youth". Physiologists, pathologists, and others have tackled the problem through "tissue-alive" and other experiments. Clinicians have apparently made strides with their prevention-of-disease approach. "Wonder-drugs" have successfully defeated some of the greatest infectious killers of just a decade or two ago. Infant and maternal mortality have been minimized. Improved surgical procedures have resulted in greater life-saving than hitherto. All these have tended to increase the life span, and the fact is well established that people are living longer.

Youth seems to be of better stock all the time and is becoming taller and sturdier. We cannot forget the toll formerly taken by rickets and various contagious, infectious, and communicable diseases. These have been minimized by improved nutrition and by health-protective campaigns, as well as by vitamins, serums, vaccines, antibiotics, etc. Building on a firmer foundation and eliminating many of the weaknesses of the structure have necessarily strengthened and prolonged life.

"Geriatric investigations must be concerned not only with the causes of the more or less rapid progress of aging and the deficiencies developing as its corollary, but also with the endeavor to correct, if possible, both the basic processes and other pathologic phenomena that may crop up in the course of aging."[1]

The Diagnostic-Therapeutic Approach In their attempt to find the cause or causes of senility, clinicians make many kinds of observations in their searching for clues. If we could find a possible cause, the simplest plan would be to follow through by treating it. Any improvement would prove the point. Perhaps we should call this diagnostic-therapeutics, or proving a questioned condition by treating it successfully. If the treatment is successful, the condition is improved, and our diagnosis may be assumed to be correct. The therapy must be more than symptomatic; it should be basic and thoroughly test-controlled. This is the method adopted in tackling the problem under discussion.

As an illustration, let us follow one clue of senility—the sex angle. It is noted that there are important phases

For assistance with chemical problems in this work, the authors wish to acknowledge the help of Dr. Harold M. Faigenbaum, Professor of Inorganic Chemistry, Rensselaer Polytechnic Institute, Troy, N. Y.

* Supplied by Research Supplies, Capitol Station, Albany, N. Y.

† Medical Director of the Jewish Home and Hospital for the Aged, Troy, N. Y.

‡ Attending Physician, Jewish Home and Hospital for the Aged, Troy, N. Y., Rensselaer Polytechnic Institute and Samaritan Hospital, Troy, N. Y.

of sex life and development, and that these vitally affect the health of the individual. In order to make matters a little more specific, let us consider in this instance only the male.

The following observations may be noted: There are apparently two particular periods of strain and stress in the male. One is puberty, when he has reached sexual maturity and becomes potent, with its subsequent adolescence. Nervousness, irritability, depression, psychosis are not uncommon. From 40 on, man may have similar mental symptoms and show many other changes. During this second stress period of life, vision frequently becomes myopic (early cataractous "second sight"), the skin is not as youthful as it was, the hair becomes grey or baldness ensues, etc. Now there also begin to occur many more serious conditions, frequently pathologic, such as angina, coronary heart disease, prostatitis, cholecystitis, gastric ulcer, myocarditis, diabetes, nephritis, etc.

There are two schools of thought along this line. Many believe that all these changes belong to a symptom-complex known as the male climacteric, while others[2] believe there is no such condition, or that if it occurs, it is very rare and not too significant. We belong to the former school, and particularly so because the diagnostic-therapeutics we have employed seem to bear out this contention.[3] By treating various climacteric conditions basically rather than symptomatically, we have noted definite improvement and well-being. In other words, it is our opinion that these various conditions mentioned are the result of gonadal decline, and that if this is treated there should be an improvement. For example, angina would be treated endocrinologically rather than with nitroglycerin, morphine, etc. The former would be etiological and more permanent, the latter symptomatic and transitory.

Observations The use of Glukor in male senility now covers a period of seven years, and our first case history goes back that far. The ages at the beginning of treatment ranged from 60 to 102. The age of 60 was taken because the previous series of cases in the male climacteric covered 40 to 60.[3] Of 237 cases treated with Glukor, 106 were guests of the Jewish Home and Hospital for the Aged; the rest were private patients. In all, there were:

74 between 60 and 70 years old
68 " 70 and 80 " "
60 " 80 and 90 " "
35 over 90

The longest period of treatment was seven years, the shortest, two months; the average, two years and six months. There was never an untoward result. The harmlessness of this drug in senility, where innocuousness is so important, cannot be over-emphasized. There was never an antagonism with any other medicament administered. Hypertension, arteriosclerosis, myocarditis, diabetes, prostatitis, chronic bronchitis, chronic nephritis, and other old-age conditions were commonly found, one or more, in practically all the cases. The longer these individuals were treated with Glukor, the less they needed other medication. The exception to this was hypertension, which did not appear to be influenced by this drug. However, the general improvement resulting from Glukor necessarily was a favorable influence with any associated condition.

The results heretofore with this kind of therapy were not sufficiently conclusive and thus resulted in varied opinions as to cause and effect. More positive results would necessarily be the proof of the pudding. Whereas testosterone may help in 50 per cent of cases, its use is questionable in prostatics and cardiacs. Also it is contraindicated in possible carcinoma as well as in arteriosclerosis, severe cardiacs and other more involved pathologic states which are frequently associated with senility.[4] In other words, if

we follow through here, and state that gonadal decline is an important etiologic factor in senility as well as in the male climacteric, then, here too, basic treatment should be helpful. The results with Glukor, a fortified pituitary hormone, in the male climacteric were noted in a previous paper.[3] The results in male senility will be observed here.

In gonadal decline, it seems that the pituitary is a more important gear in the endocrine mechanism than the testes. This has also been brought out in studies with cortisone and ACTH. Furthermore, the female anterior pituitary is more effective in the male than the male pituitary. The above pituitary hypothesis is my basic theory in the therapy of both male senility and the male climacteric.

Glukor is made up of a chorionic gonadotrophin, thiamine chloride, glutamic acid and procaine hydrochloride in the following proportions:

% by volume	Constituent	Units
40.0	Chorionic Gonadotrophin	500 I.U. per cc.
25.0	Vitamin B_1 (thiamine chloride)	100 mg. per cc.
35.0	L (+) Glutamic Acid	150 ppm

This solution contains 1. per cent procaine hydrochloride. The dose is 1cc. intramuscularly.

The above combination was arrived at after considerable research with numerous other ingredients, including not only other components of vitamin B, but also vitamin E and various other vitamins. Similarly, ingredients other than chorionic gonadotrophin and glutamic acid were tried, but in our experience the best combination was that of Glukor.

The greatest deterrents to improvement and to making observations of the results of Glukor were the acute respiratory infections, such as colds, grippe and influenza. However, at no time, regardless of any medical or even surgical condition, was it necessary to discontinue the use of Glukor. Whatever conditions there were, if this medicament did no good, it did no harm, and more frequently it seemed to help.

Let us consider a typical textbook case of senility in a man about 75 years old. His gait is slow and shuffling. The posture is stooped. The complexion may be

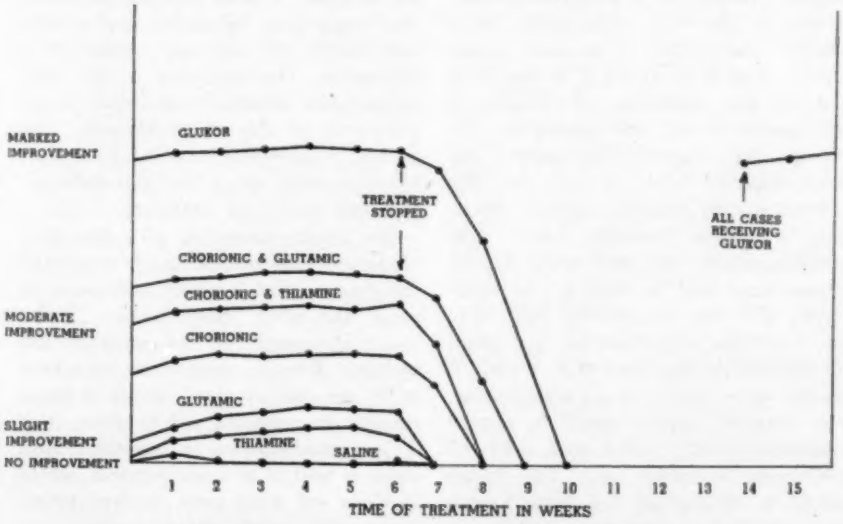


FIG. 1 Relation of treatment with Glukor to its various components and normal saline. 70 cases (not concurrent) of male senility divided into 7 groups of 10 each.

ashen. His face is wrinkled. He is tremulous. Also present, frequently, are malaise, lack of endurance, nervousness, irritability, amnesia, dyspnea, cough and frequency. Arteriosclerosis, hypertension and chronic myocarditis are probably present. Chronic prostatitis and chronic nephritis are common.

Anorexia is uncommon. As a matter of fact, the appetite is usually on the ravenous side. It is amazing how much more old people eat than young. It has been observed that even a thin old man, using up little or no energy, may eat twice as much as one a generation younger, without gaining weight, or even losing. The old crave food even though they are not sufficiently active to oxidize their voluminous intake in the ordinary way. Depriving them of just a slice of bread or an extra potato is most disturbing. To explain this, from our observations, we offer the following hypothesis: In senility, the rate of tissue degeneration is greater than the rate of tissue regeneration afforded by normal food requirements. Therefore, greater caloric values are required.

Now let us see what happens to a typical test case when given Glukor. The response may be so rapid, even within minutes, that observations must be made promptly to get the fullest initial evaluation of the effect of the drug. Here are some of the things that may be noted. The pinched, anxious expression may become smoothed over. A frown may give way to a smile. A slight flush may replace the ashy pallor. A sparkle may be noted replacing the dullness of the eyes. The patient may state that something like a cloud has been lifted from his head. He has more of a feeling of well-being. Nurses at the Home say that the injections seem to give the men a "lift." The general tremulousness and digital tremor may subside so that the patient appears calmer and more relaxed. His gait is steadier and faster. Dyspnea may give way to easier breathing. Chest pains suddenly disappear. Nycturia and cough may become less frequent. In general there ensues a euphoria. Any of the above changes should be looked for promptly after the injection of Glukor. The effects may remain several days to a week or more after the injection, depending upon the degree of senility and debility. Because of this, it is recommended that Glukor be given two times weekly until there is a definite improvement, perhaps 1 to 3 months, and then weekly as necessary, but never less than once a month. As a matter of fact, at the Home, twice weekly is routine until there is well-being and then once weekly thereafter indefinitely. Months or years of the treatment cause no ill effects and there is no habit formation. In several of the more severe cases Glukor was administered three times weekly instead of two, until sufficient results were obtained.

The only time therapy is taken away is during test-controlled periods. Practically all the individuals have received medicaments of some kind before coming under our care, so that we can make comparisons. Furthermore, placebo injections are given before Glukor, and also interspersed at various test-controlled periods. Test controls are also made by comparing the results of each of the ingredients with each other as well as with Glukor as a whole.

The improvement seen above compares favorably with results noted in the male climacteric series.[3] However, as may be noted from the case histories, some even with gross pathology were definitely helped.

The above is a composite picture of the results obtained. They are purposely detailed so that any effects may be noted as they appeared in order to make possible a truer evaluation. Some of these results may be observed after the first injection, others after, perhaps, the second or third. Unlike so many other injectables, such as testosterone, which has to be given many

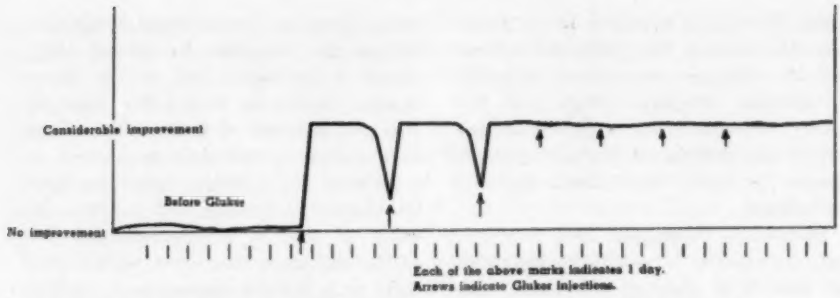


FIG. 2 Case No. 2. This man required Glukor every third day to maintain his improvement. Most cases require Glukor every one to three weeks.

weeks or even months before any definite response may be expected, Glukor may show its effect promptly. Instead of trying Glukor for months, one may rest assured that if there is no improvement after the third injection, the drug does not have to be tried any longer, as it probably will not be of any help. In these cases, there are usually complicating conditions and probably major pathology beyond repair.

Among the more dramatic results that have been noted are those in cases where anginal pains are done away with as quickly as might be expected with nitroglycerin, yet with no side-effect head symptoms. In fact, whereas nitroglycerin frequently causes head disturbances, Glukor does the opposite, and results in head relief. It was dramatic also to see a feeble 101 year old man, incontinent, and unable to feed himself, suddenly sit up and not only help himself to nourishment, but also read the paper. A similar improvement was noted with a man who was so feeble that for six weeks he was unable to get out of bed. Within one hour after taking Glukor, he walked to the dining room without aid. Some of the cases will now be discussed.

Case Histories

Case #1—N. S., Age 83

General appearance is good. Patient has a history of chronic emphysema and bronchiectasis of long standing. Following an episode of bronchial pneumonia last fall, patient was continuously plagued with persistent, productive cough which kept him awake at night. He became very uncooperative and unreasonable with the staff, as well as his wife. He was insulting and demanding. Prescribed medications were refused. Anything that was done to make his condition easier made him suspicious of being treated wrongly. He ate very little and soon became listless and stayed in his room.

The injections of Glukor were given once weekly, at first; there was no apparent change. The injections were then increased to three times weekly, and, gradually it was noted that his appetite improved; he came out to the dining hall. At this time, it was observed that, following the injections, his facial muscles appeared relaxed; his eyes were brighter; his general attitude became more pleasant, cooperative and considerate. The injections were discontinued for two weeks and his behavior changed so that it was necessary to repeat them. Now he is maintained on one injection every five days and is doing nicely.

Case #2—M. L., Age 85—Widower—Retired Merchant

Was admitted in very poor condition from a local area hospital on November

19, 1950. Patient had originally entered the hospital because of uncontrolled diabetes which was complicated by a gangrenous ulcer on the left metatarso-phalangeal joint. While at the hospital, he became irrational, disoriented and agitated. It was necessary to restrain him in his bed. He also developed incontinence of urine and feces and was unable to swallow solids or liquids, which necessitated tube feedings. The treatment as prescribed by his family physician was continued at the Home.

An injection of Glukor was given on December 14, 1950 and three times weekly thereafter. Now it is given every third day to maintain his improvement. The first change noted was ability to take and swallow nourishment; therefore the tube was removed. Subsequently it was possible to remove the restraining jacket; patient became oriented and had intervals of attentiveness. His appetite improved daily. The ulcer remained stationary, and it was possible to discontinue the insulin. Presently, he attends daily religious services and has a very good appetite.

Case #3—L. W., Age 79—Retired Printer

Since admission had been a very unmanageable individual. Believes everyone has it in for him. Remained in bed because he said that he was too weak to walk. Became very cross and insulting and at night disturbed his roommates.

Injection of Glukor was given once weekly in order to observe reactions. Within an hour after the first injection, patient asked to be helped into his walker and was soon visiting in other rooms, joining other guests, and watching television. It was also noted that he had a marked increase in strength and that his facial expression changed to an alert and smiling one. He has taken an interest in the monthly Home publication, contributing items of interest and several poems. However, he requires the injection three times weekly to maintain this feeling of euphoria.

Case #4—L. G., Age 82—Widower—Retired Tailor

Had increasing fatique, so that patient had to lie down constantly to rest. There also began to occur "weak spells," lasting 15 to 20 minutes. There was also a wheezing, with "whistling" that was heard in other rooms. The usual moderate senile tremor became so marked that it was impossible to take liquid food without help, because of spilling. Nervousness increased. Appetite very good. Bowels regular. A compensating cardiac condition has been present for 28 years.

Here, too, the first injection of Glukor was almost dramatic. There was a prompt feeling of well-being. A slight flush appeared in place of the somewhat anxious expression and greyish countenance. The wheezing stopped even as quickly as one sees in cases where nitroglycerin is given. The tremor was reduced considerably. Patient felt stronger again and could get about. For seven years now he has been getting Glukor, never with an untoward result. He seems to need this therapy to get along. During control periods, if prolonged over a month or two, the symptoms recur.

This case, too, brings up some important questions. What would have happened if he had not gotten this injection? Nitroglycerin, digitalis, vitamins, strychnine, iodine, etc., were of no avail. He was just getting weaker. It seemed natural. He was just getting older, more senile. Instead, he looks and feels better now than he did seven years ago. Yet whenever he is deprived of Glukor for any length of time his symptoms recur. Another question; Would he have died if he had not received this medicament? If so, is it possible that Glukor may increase longevity? In line with this, it might here be mentioned that for the past five years, the mortality rate at the Home has been

11 per cent compared to 25 per cent in most Homes of this type. Perhaps the steroids have more to do with senility than we now assume. This case, typical of many like it. is just the type in which we would be fearful of giving testosterone because it could introduce aggravating influences. We are frequently just as fearful of giving estrogen to women. It seems that with Glukor we have an effective hormone therapy in senility. Exactly how Glukor works may also be difficult to answer. In giving testosterone, we are simply supplying additional hormone to make up for the deficiency caused by the under-producing testicle. On the other hand, the male pituitary hormone is normally supposed to stimulate the secretion of testicular hormone by its action on the interstitial cells of Leydig. Now the question is: How does the female pituitary hormone stimulate male gonadal production? Is it the same way as with the male pituitary hormone, except that the males have seemed to respond better to the female? Sounds natural. We are too prone to take it for granted that it is simply a case of testicular decline with diminution of gonadal response here. Perhaps it is more as Werner[5] states, that this testicular gonadal failure is only a secondary response to failure of the gonadal hormone of the anterior pituitary. The advantages of thiamine chloride and glutamic acid added to the chorionic gonadotrophin have been demonstrated in the case histories. It has been our observations that this fortified female pituitary hormone, Glukor, is safe and effective in male senility, whereas testosterone is frequently contraindicated and may be harmful.

Summary

In a series of 237 cases of male senility, considerable improvement was noted with the use of Glukor, a new fortified pituitary gonadotrophin. The ages in this series were from 60 to 102. The harmlessness of the drug was advantageous in these elderly men, and, particularly so, because other medicaments, such as testosterone, are not infrequently harmful and thus contraindicated.

The effectiveness of Glukor suggests the possible relationship of gonadal decline to male senility. Diagnostic-therapeutics helped to prove this.

In order not to overlook the results of Glukor, it is important to note its time of action and duration, the same as with any other rapidly acting drug, as for example, nitroglycerin or adrenalin. Glukor may begin to act in several minutes, or hours. Its duration of action is usually a matter of days. The frequency of dosage can thus be gauged, so that it is repeated just before its effects wear off.

Bibliography

1. Goldzieher, Max A., Endocrine Aspects of Senescence, Geriatrics, 1:226 (May-June) 1946.
2. Landau, R. L., The concept of the Male Climacteric, Med. Clinics of North America (Jan.) 1951.
3. Gould, Wm. L., The Male Climacteric, Med. Times, 154: 161 March, 1951.
4. Stieglitz, Edward J., Geriatric Medicine, page 256.
5. Werner, Aug. A., The Male Climacteric, Journal of the A.M.A. 126:44 (April 15) 1939, 705:709 (March 24) 1945. 188:194 (Sept. 28) 1946.

453 Western Avenue

Use of Penicillin in Abscess

The average time of healing in 69 patients with infection of the hand who were given injections of penicillin after incision was 10.4 days. In 44 patients who were given 50,000 units of aqueous penicillin and 600,000 units of procaine penicillin by injection ½ hour before incision, the average time of healing was 5.7 days with healing usually occurring between 4 and 7 days. Ellis also reported in *Lancet* [*260*:774 (Apr. 7, 1951)] that this method supplemented with 2 Gm. of sodium sulfadiazine given simultaneously with the penicillin was very successful in 30 patients with abscesses of the buttocks, ischiorectal fossa, and perianal region. The average time of complete healing and return to work in this group was 6.5 days.

Gastro-Intestinal and Biliary Tract Surgery

Review of a Year's Work

WALTER C. FREESE, M.D., F.A.C.S.*
DONALD E. JANELLI, M.D.**
Manhasset, N. Y.

This report comprises a brief review of the immediate results in selected types of surgical procedures which were carried out at Nassau Hospital during 1950. The presented cases encompass both private and service groups.

The purpose of such a review is to determine, in a general way, the type and quality of surgery done at a 276-bed approved hospital. As the number of cases in any given procedure are relatively small, the mortality statistics are not significant. Because of this factor of small numbers, it is felt that the greatest benefit derived from this series of cases is in evaluation of the deaths. While this may seem to be a negative approach, a critical analysis of surgical failures is important to the development of surgical judgment and management.

Abdominal-Perineal Resection— Twelve cases of abdominal-perineal resection of the Miles type were done with one death. All resections were done for carcinoma.

It is interesting to note that one case was found to be squamous cell carcinoma pathologically. This type of rectal carcinoma is unusual, being reported as having an occurrence rate of 2 to 4 per cent of all rectal cancers. In certain cases the origin of the squamos cell is questionable.[1] Where the bulk of the lesion is higher than the pectinate line, the concept of metaplasia of the rectal mucosa, with secondary malignant change, has been advanced. The majority of cases undoubtedly have origin of the lesion from the skin in the anal area.

Case Report:

J. T., a 68-year-old white male, was admitted with the complaints of weakness, episodes of abdominal distention, diarrhea and passage of bright red blood rectally, of one year's duration. The last bleeding episode occurred one week prior to admission and was profuse.

Examination revealed an ulcerating carcinoma of the rectum, easily palpated by the examining finger, about 3.5 cm. above the anal orifice.

After preliminary bowel preparation, an abdominal-perineal resection was done. The sigmoidostomy was brought out through a stab wound lateral to the operative incision.

The pathological report was infiltrating and ulcerating adenocarcinoma with peritoneal extension.

Post-operatively wound infection devel-

From the Surgical Service, Nassau Hospital, Mineola, N. Y. Otho C. Hudson, M.D., F.A.C.S., Chief of Surgery.
*Chief of Division, General Surgery, Nassau Hospital.
**Resident in Surgery, Nassau Hospital.

oped and by the ninth day the wound drainage resembled small bowel content. The sigmoidostomy was observed to be undergoing stenosis.

On the seventeenth post-operative day the patient was returned to surgery and the wound widely debrided and examined. The impression of small bowel fistula was confirmed and a transverse colon loop colostomy was established in lieu of the poorly functioning sigmoidostomy.

The small bowel fistula was closed 6 days later. On the following day the patient developed acute cardiac failure and expired. The clinical course from the time of wound infection was that of steady deterioration.

Consent for post-mortem examination could not be obtained.

Comment 1. Infection was the factor of importance in this case. This occurred despite the fact that adequate pre-operative preparation with antibiotic and chemotheraputic agents had been carried out.

It might be noticed that this patient was obese. In this type of patient, wound packing with delayed closure has been advocated by some, the feeling being that a thick fat layer in the abdominal wall is a good medium in which infection can gain a foothold.[2]

2. Stenosis of a colostomy can be obviated by the excision of a circular narrow collar of skin around the colostomy site. This point is worthy of emphasis as stenosis, when present, is almost always found at this level in the abdominal wall.[3]

Appendectomy Three hundred eighty-nine appendectomies were performed. Of this number, ninety-two were prophylactic, being done at the time of elective surgery for pathology not related to the appendix.

Two hundred ninety-seven cases were operated on with a pre-operative diagnosis of acute appendicitis. Of these, two hundred nineteen were found to have disease of the appendix on gross and microscopic examination. The diagnosis of chronic appendicitis was made microscopically in only one case. The remaining specimens showed unequivocal evidence both grossly and microscopically of acute suppurative inflammatory disease, gangrene, or inflammatory disease associated with other significant pathology. Several specimens contained additional disease or findings which are unusual enough to warrent mention; one acute appendix contained diverticula; two specimens contained mucoceles, one in an early stage of development and the other quite well developed but intact; one specimen had an incarcerated cherry pit in its lumen; there was one case of argentaffin tumor; one acute suppurative appendix was found in an incarcerated femoral hernia.

Seventy-eight cases were improperly diagnosed. Regarding adenopathy of the mesenteric glands as a disputed cause of acute abdominal pain, eight ruptured ovarian cysts, one torsion of the omentum requiring removal of this organ, and one easily reduced, early small bowel intussusception were found in the presence of normal appendices. The remaining sixty-eight cases showed no pathology to explain the acute abdominal pain although in most of these cases mesenteric adenopathy was noted.

In two cases in which normal appendices were found, Meckel's diverticula were also found. These were removed together with the appendices but no microscopic pathology could be demonstrated.

Two normal appendices were found to contain pinworms in their lumina on microscopic examination, without any evidence of inflammatory change in the wall of the specimens.

Disregarding the ninety-two prophylactic appendectomies, the diagnostic accuracy in the remaining two hundred ninety-seven cases was 70 per cent. There was one death, the mortality rate being 0.003 per cent.

Case Report:

J. T., an obese 51-year-old white male, was admitted with a history of generalized abdominal pain, vomiting and diarrhea of five days duration. He was in cardiac failure with auricular fibrillation and showed clinical evidence of small bowel obstruction which was confirmed by flat x-ray examination of the abdomen.

Decompression intubation was unsuccessful. He was seen in cardiac consultation and digitalized. Despite the fact that his condition did not improve noticeably, surgery was considered necessary and he was operated on about twenty-four hours after admission.

A ruptured appendix was found, localized to the right lower quadrant by the omentum and causing a high degree of partial small bowel obstruction. Appendectomy was done.

Post-operatively the patient's course to fatality was unaffected and he expired on the first post-operative day with a hyperthermia of 107.8° and still in cardiac failure.

Post-mortem examination was limited to the abdomen. Diffuse fibrino-purulent peritonitis and portal cirrhosis of the liver were found.

Comment 1. The prognosis in this case was poor from the onset due to the multiplicity of diseases of serious import. Management by conservative methods could not be considered because of the small bowel obstruction which could not be decompressed by intubation.

2. The case of argentaffin tumor mentioned above was especially interesting because the patient originally presented herself with an unequivocal picture of ruptured appendix with localized abscess formation. Conservative therapy gave an excellent result and permitted safe elective interval appendectomy after a one-month period.

Cholecystectomy One hundred five cholecystectomies were done with two deaths and a mortality rate of 1.9 per cent. In six cases or 5.6 per cent of the series, choledochostomy was also carried out.

The indications for common duct exploration were history or presence of jaundice, and/or palpable or visible evidence of common duct enlargement or obstruction.

There was no uniformity concerning the time of surgical intervention in acute cholecystitis. In the two deaths reported in this series of cases, it is interesting to note that one patient was subjected to immediate surgery while the second patient was initially treated conservatively.

Case Report: I

W. K., a 56-year-old white male, was admitted with a history of right lower abdominal pain of twenty-four hours duration, with nausea, anorexia and one episode of vomiting.

In the past history it was found that the patient had pulmonary tuberculosis of twenty-three years duration and had a right-sided pneumothorax which was still being maintained.

Examination revealed a poorly nourished, emaciated, acutely ill patient with hypertension of 172/90, signs of chronic right pneumothorax, and abdominal findings of diffuse right abdominal tenderness and spasm.

He was taken to surgery shortly after admission with a pre-operative diagnosis of acute appendicitis. Acute cholecystitis was found at operation and a cholecystectomy performed without undue difficulty.

The pathological report was acute suppurative cholecystitis.

The immediate post-operative course was good. The patient was comfortable, afebrile and ambulatory by the second post-operative day. This status was unchanged till the fourth day when the patient expired quietly in his sleep.

Post-morten examination revealed early myocardial infarction. Other findings of interest included acute fibropurulent pericarditis, chronic right-sided tubercu-

lous empyema, diffuse liver cell necrosis with focal liver abscess, caseous tuberculosis of the right adrenal gland, and dissecting aneurysm of the abdominal aorta with extension to both common iliac arteries.

Comment The point of chief clinical interest in this case was the error in pre-operative diagnosis. The differential diagnosis between acute appendicitis and acute cholecystitis is usually not difficult but in a certain small number of cases will be a problem usually because of the normal variations in the position of the appendix.

There was nothing in the past history to suggest gallbladder disease in this patient and the immediate history and physical findings were compatible with the diagnosis of acute appendicitis. Fortunately in this case, the acute episode was of short enough duration for cholecystectomy per se to be both justified and technically feasible.

Case Report: II C. B., a 77-year-old white male, was admitted with a history of complete obstipation of five days duration, anorexia, and recurrent episodes of vague abdominal pain. The patient was somewhat confused mentally and his general condition was poor.

Examination revealed a large, easily palpable, slightly tender mass filling the entire right upper quadrant. There was no evidence of abdominal distention and flat x-ray examination of the abdomen did not demonstrate evidence of intestinal obstruction.

Treatment was conservative and fluid and salt balance achieved by the intravenous route. The patient's physical findings and general condition remained unchanged till the fourth day of hospitalization. At this time generalized, marked rebound tenderness was elicited in all quadrants. Repeat flat x-ray examination of the abdomen showed a generalized haziness which was attributed to intraperitoneal fluid. The white blood count was repeated and found to have risen to 30,000 with 98 per cent polynuclear cells.

The patient was taken to surgery on the same day and a ruptured gangrenous gallbladder found. The palpable mass in the right upper quadrant was found to be omentum and transverse colon which had attempted to seal off the inflammatory process. The peritoneal cavity contained large amounts of brown-colored fluid from which *E. coli* and non-hemolytic streptococci were cultured. The greatest portion of the gallbladder being gangrenous, it was excised and the gallbladder stump and peritoneal cavity drained. The pathological report was gangrenous cholecystitis.

The patient expired on the first post-operative day.

Consent for autopsy was not obtained.

Comment The paucity of abdominal findings suggestive of a well established acute inflammatory process in old-age group patients is well illustrated in this case. In this instance, on the day that rebound tenderness was first elicited, the patient had to be awakened for examination and at that time offered no complaints.

This problem in elderly patients is frequently encountered and the surgeon must be cognizant of its existence in evaluation of physical signs.

Cholecystostomy Ten cholecystostomies were done with one death.

This procedure is usually not one of choice but is generally reserved for elderly patients with acute cholecystitis who do not respond to conservative therapy, have progression of the disease process, and are not suitable candidates for cholecystectomy during the acute stage because of poor general condition or the anatomical nature of the pathology.

Case Report: C. O., a 71-year-old white female, was admitted with an episode of acute cholecystitis of three days duration. She had known of her gallbladder disease for about one year but had failed to ad-

here to a medical regimen with consequent recurrent acute attacks. The present episode was more severe than any of the previous attacks and had gotten progressively worse.

On admission the patient was in poor general condition. She was acutely ill, jaundiced and in mild congestive heart failure. The fundus of the gallbladder was palpable.

She was taken to surgery after twenty-four hours of supportive therapy and a cholecystostomy established under local anesthesia. Peritonitis was found and *E. coli* and *B. proteus* were recovered on culture. The gallbladder was acutely inflamed and distended and, except for the fundus, was enveloped by the omentum which was left undisturbed. That the gallbladder had ruptured at some point was inferred by the gross presence of bile in the peritoneal cavity.

Post-operatively the patient's course continued unchanged and she progressively worsened to expire on the first post-operative day.

Consent for post-mortem examination was not obtained.

Comment This patient showed rather marked clinical improvement objectively and subjectively during the first six hours of admission with supportive therapy of parenteral fluids and antibiotics and cardiac therapy. The decision was made to continue with conservative treatment, whereupon the patient's condition began to progressively deteriorate.

This relates to the problem of timing of surgical intervention in acute gallbladder disease. There are several schools of thought along these lines which are beyond the scope of this paper to discuss. In retrospect, it was felt that this patient's chances for survival would have been better had surgery been undertaken after the initial favorable response.

Choledochostomy Twelve cases of choledochostomy are recorded with one death. Six were done at the time of cholecystectomy, five were done as secondary procedures with a history of previous cholecystectomy, and one was done at the time of duodenotomy and cholecystojejunostomy for carcinoma of the ampulla of Vater.

Case Report L. M., a 34-year-old white male, was admitted with deep jaundice and a history of cholecystectomy done two months previously. At the time of surgery, the common duct was noted to be normal to inspection and palpation and as there was nothing in the past history to suggest common duct obstruction, choledochostomy was not done. The post-operative course had been uneventful and no blood or plasma had been given during hospitalization.

At the time of present admission he had jaundice of twelve days duration which was increasing in intensity. He did not seek medical advice till the eighth day of jaundice and the icteric index at this time was 112. When admitted to the hospital four days later, the icteric index was 144.

Liver function tests were inconclusive in determining the origin of the jaundice and the history assumed increased importance.

A choledochostomy was performed. The common duct was found to be anatomically intact and on exploration of the duct, no obstruction could be demonstrated.

Post-operatively the patient ran a progressively poor course, expiring on the tenth post-operative day.

Post-mortem examination revealed an intact extrahepatic biliary system and acute infectious hepatitis.

Comment 1. The unfortunate series of events of cholecystectomy followed in eight weeks by deep jaundice, together with the patient appearing for evaluation when the jaundice and underlying disease process were too well established for repeated liver function studies to reveal the nature of the pathology, led to surgery in the presence of marked liver damage.

As a group, patients with marked

parenchymal liver damage do not stand surgery well. This is attributed, at least in part, to the anoxia incidental to anesthesia and surgery and its effect on the already damaged liver substance with resulting liver failure.[4] Other factors such as disturbance in protein metabolism are probably of equal importance but all are imperfectly understood.

2. This case illustrates the inadequacy of present methods in the differential diagnosis of jaundice when the patient appears late in the course of the disease. The differential diagnosis of jaundice is most successfully managed when the patient is seen early. Selected liver function tests repeated at frequent intervals, when properly interpreted and integrated with the clinical picture, usually give good results in establishing the diagnosis.

Gastrectomy Thirty-nine gastrectomies were done with five deaths. Only one total gastrectomy was done, this in a case of carcinoma. The remaining cases were subtotal gastrectomies of the Balfour-Polya or Hofmeister types.

The following pathology was found: benign duodenal ulcer, 20 cases; benign gastric ulcer, 10 cases; carcinoma of the stomach, 5 cases; multiple benign ulcers of the stomach, 1; multiple benign ulcers of the stomach and duodenum, 1; localized chronic proliferative gastritis, 1; marginal ulcer, 1.

Atelectasis requiring bronchoscopy occurred in three cases, one of these being the total gastrectomy.

Case Report: I A. W., a 47-year-old white female, was admitted in profound shock following passage of a large tarry stool. Blood pressure on admission was 70/40.

Examination on admission was not remarkable except for the state of shock. The hemoglobin was 2.4 grams per cent and the red cell count was 900,000.

The patient was treated with multiple whole blood transfusions for two days with clinical improvement and rise in hemoglobin level. Further bleeding then occurred making further transfusions necessary.

By the ninth hospital day the patient was in good enough condition to have a barium study of the upper gastro-intestinal tract. The x-ray interpretation described the stomach as showing very extensive involvement by malignant neoplasm with a high degree of pyloric obstruction.

Melena continued but with continued blood replacement the hemoglobin was finally brought to a level of 10 gm.

On the nineteenth hospital day the patient was taken to surgery. The findings at operation revealed a gastric lesion on the lesser curvature, the extent of which was not comparable to the massive involvement demonstrated on x-ray examination. The lesion had penetrated to the pancreas and in doing a subtotal Balfour-Polya gastrectomy, an ulcer base was left on this organ.

The pathological report was chronic gastric ulcer.

The immediate post-operative course was satisfactory till the evening of the second day when she developed pneumonia of the right lower lung. The course of the disease was fulminating and despite multiple antibiotic therapy the patient expired on the fourth post-operative day.

Post-mortem examination revealed lobar pneumonia of the right lower lobe with hepatization. The abdomen was not remarkable, the operative area being intact.

Comment 1. The limitation of roentgen ray examination, for pathological diagnosis and extent of disease, is illustrated in this case.

2. In retrospect it was felt that prophylactic antibiotic and chemotherapy should have been used although precise indications for such usage are lacking.

Case Report: II W. B., a 57-year-old white male, was admitted with a history of chronic duodenal ulcer with intractable pain. Recent x-ray examination had revealed a posterior penetrating duodenal ulcer.

A subtotal Balfour-Polya gastrectomy was done. The patient was quite obese and the omentum was also removed because of its unusual size and weight.

The pathological report was chronic peptic ulcer.

On the first post-operative day the patient developed massive atelectasis of the right lower lung field. Bronchoscopic aspiration was done on the same day. Bronchopneumonia supervened and bile drainage appeared in the wound, indicating the probability of duodenal stump blow-out. The patient rapidly worsened and expired on the third post-operative day.

Autopsy consent could not be obtained.

Comment 1. In the presence of multiple complications and the absence of autopsy material for study, it is difficult to evaluate the relative importance of the complicating entities in this case.

2. Because this patient showed evidence of duodenal stump leakage, it is appropriate at this point to note that, almost without exception, gastrectomies at this institution are drained. A Penrose drain is placed in the region of Morrison's pouch, care being taken, however, that there is no direct contact between the suture line of the duodenal stump and the drain. This latter precaution precludes the drainage of the substances normally involved in the healing of the stump tissue. With the drain so situated, if leakage of the stump occurs, egress is provided along the drain and an end-type duodenal fistula established. This is felt to be preferable to continuous leakage into the peritoneal cavity.

Case Report: III G. T., a 62-year-old white male, was admitted with a history of "stomach trouble" of seven years duration with increasing intractability of pain and weight loss of forty pounds during the past year.

Physical examination was not remarkable except for some emaciation and a hypertension of 185/110.

X-ray examination by barium meal just prior to admission showed evidence of a prepyloric lesion suspected to be malignant neoplasm. Repeat examination following admission revealed duodenal deformity but did not demonstrate a prepyloric lesion.

A subtotal Balfour-Polya gastrectomy was done under cyclopropane anesthesia. The blood pressure during the procedure was almost constantly at the 250/120 level. At the closing of the operation the patient suddenly became cyanotic. After receiving oxygen in the operating room he was returned to the floor and placed in an oxygen tent. During the night he developed acute cardiac failure with a marked fall in blood pressure. He did not respond to cardiac therapy and expired on the second post-operative day. During the day of surgery he had received 4000 cc. of fluid intravenously.

The pathological report was benign gastric ulcer.

Post-mortem examination consent could not be obtained.

Comment 1. Because autopsy was not done, the chain of events terminating in death must be postulated on the basis of known facts. It is felt that the sustained hypertension during surgery under cyclopropane anesthesia, with a period of cyanosis following, represented a period during which myocardial infarction may have occurred. With subsequent fall in blood pressure to a systolic of 90, accompanied by congestive failure, additional support is added to this concept. Further, the infusion of four liters of fluid during the day of surgery was injudicious, throwing added strain on an already inadequate circulatory system.

2. The limitations of x-ray examination by barium meal in localizing a lesion are illustrated.

Case Report: IV S. H., a 38-year-old white male, was admitted with a history of generalized abdominal pain and vomiting of a few days duration.

One month prior to the present admis-

sion he had been admitted with an acute perforation of a high primary jejunal ulcer which had been closed. At that time a by-passing gastrojejunostomy was done because the stoma of the small bowel at the site of the lesion was felt to be inadequate.

Examination at the time of the present admission was not remarkable except for epigastric tenderness. Flat x-ray examination of the abdomen showed the stomach to be distended with gas. Gastric suction was instituted to relieve vomiting.

Surgery was deemed advisable and on the day prior to operation an upper gastro-intestinal barium study showed 20 per cent gastric retention at five hours. The patient was in alkalosis which was treated by saline infusions. Moderate alkalosis was present at the time of surgery.

At operation a perforating marginal ulcer was found which was localized by the omentum. A high loop of jejunum was adherent to the more proximal site of previous jejunal perforation with resulting partial obstruction. Confronted with this situation in a patient with marked ulcer diathesis, the gastrojejunostomy was taken down and a subtotal Balfour-Polya gastrectomy done.

Post-operatively the patient continued in alkalosis although to a lesser degree. Anuria developed and the patient expired on the third day having formed only 10 cc. of urine during the last twenty-four hours of life. Mental confusion, stupor and coma were present terminally.

Consent for post-mortem examination could not be obtained.

Comment 1. The carbon dioxide combining power in this patient was 118 pre-operatively and 85 post-operatively. Treatment of the alkalosis was with sodium chloride infusions. While such management has a sound basis, apparently more energetic therapy, such as the use of ammonium chloride, might have given better results in returning the acid base balance to normal.

2. The development of anuria post-operatively is not easy to explain, particularly in the absence of autopsy material for study. Alkalosis in itself, to the degree noted, might be held accountable for this development. Lower nephron nephrosis might be postulated as the cause of anuria, the kidney damage possibly being due to transfusions, surgical shock or both.

3. This case is of particular interest because of the history of primary jejunal ulcer which is a rare pathological entity.

Case Report: V J. K., a 72-year-old white male, was admitted with a history of epigastric pain of three years duration with progressively increasing severity and recent melena.

In the past, the patient had had a malignancy of the epiglottis removed three years ago with subsequent radium implantation. Recent check had revealed no evidence of recurrence. Twelve years ago the patient had had a duodenal ulcer.

Physical examination was not remarkable, the patient being in good general condition for his age.

On examination by barium meal, it was noted that the walls of the stomach were rigid with destruction of the normal rugal pattern. There was a constant filling defect in the pars media and antrum of the stomach. The x-ray diagnosis was carcinoma of the stomach. A chronic duodenal ulcer was also noted.

A subtotal Balfour-Polya gastrectomy was done. At operation the gross anatomy and pathology were found to be incompatible with the x-ray findings, the stomach being soft and pliable.

The pathological report was multiple, active and chronic gastric and duodenal ulcers.

The patient withstood the procedure well but expired suddenly on the evening of operation, having been seen by a house physician only twenty minutes previously.

Post-mortem examination revealed noth-

ing other than minimal pulmonary edema. The operative area was intact.

Comment Despite the fact that autopsy was performed, the cause of death is obscure. The total amount of fluid received during and after surgery was two liters, five hundred cc. of this being whole blood. The blood pressure and pulse were stable till the time of death and there was nothing in the clinical picture to suggest shock. The possibility of ventricular fibrillation or cardiac standstill must be considered. The pulmonary findings at autopsy were compatible with a terminal cardiac arrhythmia of these types.

Colectomy Twenty-five colectomies were done with two deaths. The pathology in twenty-one cases was carcinoma. The remaining four cases have points of interest which are worthy of mention.

In one case the pre- and post-operative diagnosis was carcinoma of the sigmoid. An anterior resection was done. The pathological report was active, chronic, granulomatous inflammation with foreign body giant cell reaction. The anastomosis broke down in this case and the patient expired.

In the second of the non-carcinoma cases, a napkin ring lesion of the sigmoid was found which was interpreted at surgery as being carcinoma. The pathological study indicated that an intramural, circumferential, dissecting diverticulitis was present.

The third case was operated on with a pre-operative diagnosis of ovarian cyst. At surgery the pelvic viscera were found to be normal but a tumor mass of the sigmoid was noted. The resected specimen revealed acute and chronic diverticulitis.

The fourth case is probably the most interesting because it represents a relatively new approach to the treatment of uncomplicated diverticulitis.[5] The patient, a 73-year-old white female, had complaints of recurrent episodes of abdominal pains of a few years duration. Barium enema examination revealed diverticula in the sigmoid colon with some narrowing of the bowel lumen. It was decided to do an elective anterior resection, the feeling being that as the symptoms had been becoming more severe, acute obstruction might be anticipated. The planned procedure was carried out, the pathological diagnosis confirming the clinical diagnosis, and the patient made a completely uneventful recovery. The patient has been entirely free of symptoms since surgery, a period of eight months.

The distribution of all lesions in frequency is summarized in Table 1.

TABLE 1

Location	No. of Cases	CA	Other
Rectosigmoid*	8	8	0
Sigmoid	6	2	4
Right colon	6	6	0
Left colon	3	3	0
Transverse colon	2	2	0

(* The accuracy in classifying eight cases as being in the rectosigmoid is questioned. The anatomical extent of the rectosigmoid being poorly defined, it is possible that some of these cases may actually have been in the lower sigmoid colon.)

Case Report: I M. T., a 60-year-old white female, was admitted with signs of partial large bowel obstruction with distention, crampy abdominal pains, fever and constipation. She was treated conservatively and carried over the acute stage of illness.

Proctoscopic examination revealed that the bowel was angulated and fixed at seventeen centimeters but the lesion could not be visualized. Barium enema and double contrast study showed evidence of a lesion in the sigmoid colon. Diverticula were noted in the left colon.

At surgery, the lesion was found to be in the low sigmoid and was densely adherent to the bladder and posterior and left lateral pelvic walls. Enlarged nodes were palpable in the sigmoid mesentery and some tiny nodules were palpable in the liver. An anterior sigmoid resection with cecostomy was done.

The pathological report was active, chronic granulomatous inflammation with

foreign body giant cell reaction and chronic lymphadenitis.

The post-operative course was uneventful till the fifth post-operative day when the patient had sudden severe abdominal pain, distention and marked spasm and tenderness in the upper abdomen. Her condition worsened rapidly. She became semicomatose and jaundiced and oliguria developed. Three days later an incision and drainage of an abscess pointing in the left flank was done under local anesthesia with return of purulent and fecal material. The patient expired three days following this procedure.

Post-mortem examination revealed a breakdown of the line of anastomosis with generalized suppurative peritonitis. The small nodules palpable in the liver were found to be hemangiomata.

Comment 1. While recent studies on cadavers have shown that the critical point of Sudek is not constant, it would appear that in this case it probably was of importance. This may be inferred because the location of the lesion was such that the anastomosis was carried out in the so-called "critical area."

2. The hemangiomata in the liver are of interest and of importance. It is well to keep in mind that other lesions in the liver may simulate metastatic disease when palpated. In certain cases proper evaluation of such lesions may mean the difference as to whether or not radical surgery is carried out, particularly when the nature of the primary lesion is in doubt as is so frequently the case.

Case Report: II P. D., a 61-year-old white male, was admitted with obstipation of five days duration. The history was one of increasing constipation and episodes of lower abdominal pain of a few weeks duration.

Examination revealed marked abdominal distention and tympany. Flat x-ray examination of the abdomen confirmed the diagnosis of complete intestinal obstruction and showed the obstructing level to be in the sigmoid colon.

A cecostomy was established on the day of admission with good surgical decompression.

Sigmoidoscopic examination revealed an ulcerating, necrotic lesion at fifteen centimeters which on biopsy was found

TABLE 2

Operation	No. of Cases	Deaths	Factors Relating to Death and Autopsy Findings	Autopsy
Abdominal—perineal	12	1	Cardiac failure preceded by wound infection, small bowel fistula and stenosis of colostomy.	No
Appendectomy	389	1	Cardiac failure. Liver cirrhosis. Diffuse fibro-purulent peritonitis.	Yes
Cholecystectomy	105	2	1—Myocardial infarction. Acute fibro-purulent pericarditis. Chronic tuberculous empyema. Caseous tuberculosis of right adrenal gland. Dissecting aneurysm of abdominal aorta and both common iliac arteries.	Yes
			2—Ruptured gangrenous gallbladder with peritonitis.	No
Cholecystostomy	10	1	Congestive heart failure. Ruptured gallbladder with peritonitis.	No
Choledochostomy	12	1	Acute infectious hepatitis.	Yes
Gastrectomy	39	5	1—Lobar pneumonia	Yes
			2—Atelectasis, broncho-pneumonia, duodenal stump leak.	No
			3—Myocardial infarction and congestive heart failure.	No
			4—Alkalosis and anuria.	No
			5—Cardiac standstill.	Yes
Colectomy	25	2	1—Breakdown of anastomosis.	Yes
			2—Generalized peritonitis.	No

to be adenocarcinoma. On the day following biopsy, the patient developed fever, the cause of which could not be determined but which when treated empirically with penicillin and streptomycin gradually subsided.

At the time of definitive surgery the lesion was found to be in the rectosigmoid area. There was marked inflammatory reaction around the mass and it was densely adherent to the pelvic wall. A Hartman type resection was done with the sigmoidostomy established through a stab wound lateral to the operative incision. During the operative procedure an abscess posterior to the rectosigmoid was entered into. Cultures of the abscess contents grew nonhemolytic streptococcus, *E. coli* and *B. subtilis*.

Post-operatively the patient was placed on penicillin and streptomycin. Despite this he ran a low grade fever. On the fifth day signs of partial small bowel obstruction appeared and were confirmed by flat x-ray examination. At this time wound infection was noticed and the skin sutures removed. Attempts at decompression intubation during the next two days were unsuccessful, in a large part because the patient frequently removed the tube. On the seventh day the patient developed acute, severe, generalized abdominal pain and shock. Repeat flat x-ray examination of the abdomen at this time showed large amounts of free air under the diaphragm. The patient refused further surgery for the next twenty-four hours, finally submitting on the insistence of his family. At this time he was practically moribund.

On reopening the abdomen a diffuse suppurative peritonitis was found. No definite point of obstruction was found although a number of loops of small bowel were adherent one to another through the inflammatory exudate covering the serosa. Examination of the abdominal contents was limited by the extent and nature of the pathology but no viscus perforation was found. Post-operatively the patient went downhill rapidly and expired on the fourth day following operation covered with uremic frost.

Consent for post-mortem examination could not be obtained.

Comment The chain of events terminating in death is obscured by lack of autopsy material for study. In retrospect it seems likely that the signs of an acute abdominal catastrophe, occurring on the seventh post-operative day, may have resulted from the rupture of an unrecognized intra-abdominal abscess.

Summary

1—Table 2 records the pertinent details of the immediate results of selected types of gastro-intestinal surgery done in 1950.

2—Because of the relatively small number of cases in any given series, particular attention is directed to the death cases as a means of pointing out problems frequently encountered by the surgeon.

References

1. O'Brien, J. P. and Donald J. Meehan: Squamous Cell Carcinoma of the Rectum. Ann. Surg., 133:283, 1951.
2. Allen, Arthur: Regional Meeting, American College of Surgeons, Philadelphia, March 1951.
3. Lahey, Frank: Annual Clinical Congress, American College of Surgeons, (Operative Clinic), Boston, October 1950.
4. Ravdin, I. S. and Harry M. Vars: Further Studies of Factors Influencing Liver Injury and Liver Repair. Ann. Surg., 132:362, 1950.
5. Boyden, Allen M.: The Surgical Treatment of Diverticulitis of the Colon. Ann. Surg., 132:94, 1950.

Medical Schools Set Enrollment Record

A total of 26,191 students were enrolled in 79 approved medical schools in the United States for the 1950-51 school year. This is the largest enrollment in the history of the country's medical schools. This number is an increase of 1,088 over the 25,103 enrollment of the previous year.

Also, an estimated 7,400 freshmen will enter medical schools this fall. This figure will top all previous first year enrollments.

Superficial Cysts

Sebaceous Cysts, Implantantion of Epidermoid Cysts, Dermoid Cysts

Sebaceous Cysts Sebaceous cysts are retention cysts due to the blocking of the ducts of sebaceous glands. They are semispherical, smooth-surfaced, doughy proturberances of the skin in size from a pea to an egg, which are attached to the skin but are freely movable with the skin and are not attached to the underlying structures. They occur most frequently on the skin of the scalp and head but may also occur on other parts of the body. They occur at all ages.

Sebaceous cysts may be distinguished from dermoid and epidermoid cysts by the fact that the skin covering the latter two can be easily moved and folded over the cysts while their base is attached to the deep fascia or periosteum and therefore the entire cyst cannot be slid back and forth as a sebaceous cyst can. Figs. 1, 8, 9.

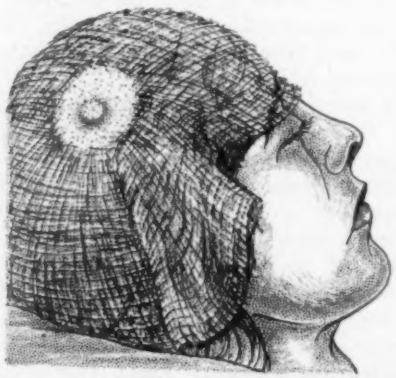
Treatment Sebaceous cysts should be excised because they are disfiguring on the exposed parts of the body and they frequently become infected and also they may undergo malignant degeneration.

Fig. 1. Diagrammatic representation of a Sebaceous cyst.

Preparation of the Field of Operation The area around the cysts should be shaved and when cysts are on the scalp the hair should be held out of the field of operation by pinning a towel or wind-

Fig. 2. The preparation of the site of operation.

Fig. 3. The draping of the site of operation.



ing a two inch gauze bandage around the head. Fig. 2.

The shaved skin should then be painted with an antiseptic solution. The skin around the cyst is draped with a sterile gauze pad in which a hole has been made or by three sterile towels. Fig. 3.

Local infiltration anesthesia (1 per cent Novocain) is applied over the incision, which consists of two curved lines over the convexity of the cyst. Both ends of the line meet in a sharp angle ¼ inch beyond the cyst. The infiltration should extend somewhat farther than the lines of incision. The base of the cyst should also be infiltrated. Fig. 4.

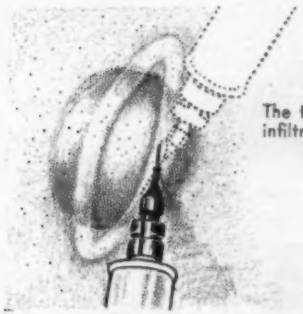


Fig. 4
The technique of infiltration anesthesia.

The incision lines are shaped in such a manner that no redundant skin is left after the removal of the cyst and consequently a better approximation of the skin edges can be made. The skin is incised with great care up to the cyst wall, which appears as a grayish white structure. The wound edges are separated and after locating the cleavage plane between the cyst wall and skin, the cyst is exposed by blunt dissection with scissors towards the base of the cyst and the entire cap-

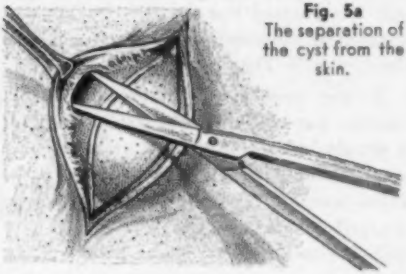


Fig. 5a
The separation of the cyst from the skin.

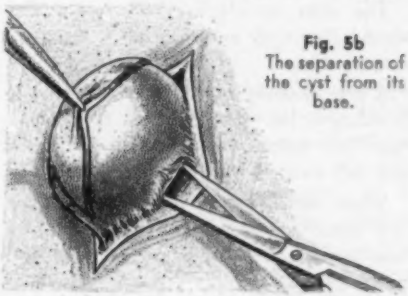


Fig. 5b
The separation of the cyst from its base.

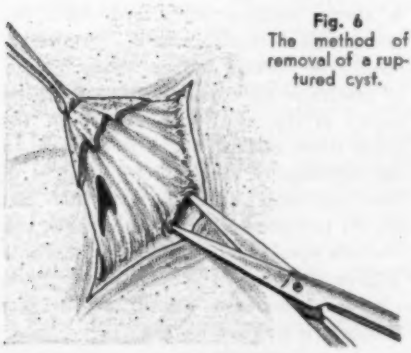


Fig. 6
The method of removal of a ruptured cyst.

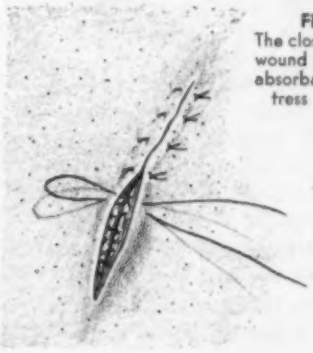


Fig. 7
The closure of the wound with non-absorbable mattress sutures.

sule is separated from its bed, leaving the redundant spherical slice of the skin on the cyst wall. Fig. 5.

If the cyst wall ruptures and the caseous material is spilled into the wound it should be carefully wiped away and the wound should be cleanesd with an antiseptic solution. The ruptured cyst wall is grasped with a mosquito forceps and dissected with scissors from its base. Fig. 6.

The skin is adapted by closing the wound lips with non-absorbable mattress sutures. Fig. 7.

A firm dressing is applied. The dressing is changed the day following the operation. The sutures are removed the sixth day following the operation.

When the cysts are infected no extensive dissection should be done. In this case incision and drainage is the proper procedure.

Epidermoid Cysts or Implantation Cysts (Fig. 8.) These cysts are the result of an injury which carried fragments of epidermis beneath the skin surface and the displaced epidermis formed a cyst. Epidermoid cysts are most commonly seen on the palmar surface of the

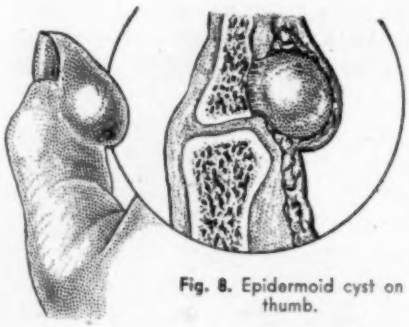


Fig. 8. Epidermoid cyst on thumb.

hand and finger and on the plantar surface of the foot and toes.

It is best to excise these cysts and the excision should be carried out as in sebaceous cysts; however, as they do not have a well defined cleavage plane it is more difficult to remove them in intact condition.

Dermoid Cysts (Fig. 9.) These cysts are of congenital origin and appear along the lines of embryonal closure of the skin. They occur at the medial or lateral angle of the orbit, in front of or behind the ears. The capsule of a dermoid cyst is much

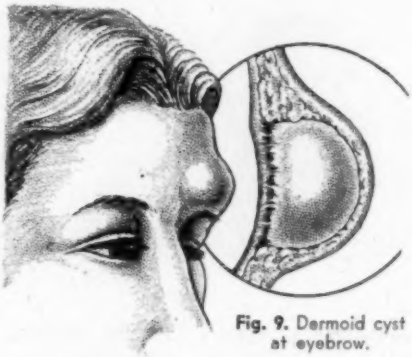


Fig. 9. Dermoid cyst at eyebrow.

thicker than that of the sebaceous cyst and its content consists of a caseous material mixed with hairs.

Treatment is excision. Because the base of the dermoid cyst is always attached to the underlying structures, dermoid cysts must be removed with sharp dissection.

The separation of the overlying skin is always easily accomplished. After the greater part of the sac is liberated it should be opened and emptied in order to determine the extent of the cyst. If the cavity of the cyst extends between the nasal bones or if it is closely adherent to the cartilage of the auditory canal or to the skull only those parts of the cyst should be removed that are accessible and the rest should be cauterized with carbolic acid or diathermy. The operation wound is closed by mattress sutures and a firm dressing is applied.

EDITORIALS

Surgery Without Fear

The surgeon of a century ago was concerned with the task of developing surgical procedures which were safe for the patient. Within the present half century the men of medicine coöperated in their desire to make the patient safe for surgery. This encompassed the era of preoperative care, blood transfusion, study of blood chemistry and the like. It was usual to discuss a patient in such terms as, "the gastric case," or "the patient with a gangrenous gallbladder."

Modern surgery goes beyond this stage. Not only is the patient made safe for surgery physically, but the surgical candidate is prepared mentally for the operating room. He is therefore totally equipped in both his "psyche" and his "soma" as a psychosomatic entity to undergo a major surgical procedure.

The mental aspect of surgery is not an entirely new concept. Its general acceptance and application, however, are of recent origin. In years past it was common for the thyroid surgeon to subject his patients to surgery without their knowledge of the exact day of operation. Those were the days when avertin anesthesia enjoyed great popularity. The logic of operating upon a patient who was free of anxiety, and fears of surgery, was justified in the excellent results obtained in thyroid surgery.

The tempestuous years in which we find ourselves have produced a mental unrest which finds expression in the facility with which human beings are plunged into psychic disquietude. Thus it is that mental anguish seen preoperatively is no longer identified with thyroid patients alone. It may be associated with any type of surgical procedure. The alleviation of the fear of surgery today is equally as important as the physical preoperative preparation of the patient. This mental aspect of the surgical patient finds a basis in physiological facts. It has found expression in Hans Selye's Adaptation Syndrome. (*Acta, Inc.*, Montreal, Canada, 1950.) The mechanism of this concept concerns an "alarm stimulus" which is instituted by surgery, severe accidents or toxicity.

The stimulus encourages the anterior pituitary to produce ACTH, which in turn stimulates the adrenal cortex. This in turn secretes corticoids which depress the adrenal gland with a diminishing adrenal cortex response to stress conditions which may result in death from glandular exhaustion. Constant or repeated glandular imbalance may be the source of mental disturbances arising in surgical patients. In this situation there have been advocates of therapeutic measures to counteract this exhaustion by the administration of lipo-adrenal cortex. The acknowledgment of the existence of this problem is attested by the various

products sold by the pharmaceutical houses. For example, there is a product which is termed a "euphoriant when mental depression is a problem." Another is to be employed "for the symptomatic relief of mental and emotional distress." Another preparation is advocated for the management of anxiety states without recourse to barbiturates. All these products have the primary objective of alleviating mental disturbances.

As for the surgical patient, the best medication is simple assurance and the preservation and augmentation of confidence on the part of the patient for his doctor and/or surgeon. This encouragement of confidence finds completion in the preservation of the time-honored doctor-patient relationship. This relationship is part of American tradition and justifies its existence by the tangible beneficial results of modern surgery.

Surgery has been made safe for the patient. It is now the duty of modern surgeons to prepare the patient both physically and mentally so that he may be safe to receive the full benefits of modern surgery. All the concerted efforts of medicine and surgery have made available to humanity great promises of cure in many diseases. Men of medicine and surgery merely desire to fulfill their destiny and apply their knowledge for the benefit of their fellow man. Without restraint from political influence and with freedom of action and choice the patient of today should be prepared to accept the benefits of medical knowledge and surgical skill without fear.

B. J. F.

Chinese Nutrition Under Communism

We have learned that it is in underfed areas of the world that communism generates. Yet, ironically enough, the first act of the present totalitarian regime in China was to lower by decree the standard of living, including food allotments. Already breakdowns from tuberculosis are increasing rapidly as a consequence. It is alleged by the Government that the restrictions are temporary and that improved agricultural methods will remedy present conditions, especially if plans to control population along with everything else can be put into effect.

The Chinese dietary, except for the ruling classes, includes about 90 per cent cereals and 5 per cent protein. The army ration includes a small amount of meat. Millet seems to provide the basic cereal element. Vitamins and amino acids are notably deficient in the dietary but efforts are being made to supplement them.

What is the good of the increased crop yields which are planned (on a very limited area of arable soil) if the dietary remains so unbalanced?

Perhaps it will be this nutritional question that will wreck the political monstrosity now directing the destiny of Cathay—not to speak of the military aspect of things.

The chief authority in this matter of Chinese nutrition is William H. Adolph, now at the School of Medicine, Yale University, and formerly a research worker at the Peking Union Medical College.

New Hypertension Criteria

We are told by Master, Goldstein and Walters [*Bulletin of the New York Academy of Medicine* 27:452 (July) 1951] that we should revise our standards of the normal quite a bit upward. This has been suggested before by Alvarez and others. Our criteria on this point seem to have emanated chiefly from life insurance quarters and we have tended to disregard the several important studies which, over the years, have admonished us on this subject. The study of Master, *et al.* was based on a very large number of individuals and they have endeavored, successfully, to give us new definitions of normal blood pressure and

the clinical significance of the newly established limits.

Women over fifty run higher than men, normally.

A reading of this paper should re-orient everybody along rational lines, to the great gain of all patients, normal persons and clinicians. What we have frequently considered hypertension heretofore has often been within normal range, according to this new research.

Without Dismounting

Dr. Lewis J. Moorman, noted author of *Pioneer Doctor*, has described many characters of the early days in our Southwestern country, but none more strikingly than Josiah Gregg, a kind of amateur doctor who, developing tuberculosis, went on the Santa Fé Trail with one of the periodic caravans and found his health restored, whereupon he entered one of the medical schools in Louisville, received a degree, and proceeded to practice medicine in Mexico on a "$15.00 pony worth $1,000," that "learned to pace right into the adobe houses so he could take the pulse and look at the tongue *without dismounting*."

Gregg, by the way, wrote a remarkable book, *Commerce of the Prairie* (1850). It is one of the mileposts along the marvelous road of American progress.

What Then?

A strike of the nationalized doctors of Britain, against the low per capita fee per patient, seems to be likely some time this fall. If this should happen, or even if it remains a serious threat, it will tend to reveal the present British profession as essentially a trade union.

The doctors were easy to bludgeon into the National Health plan because of economic necessity; now they find that to make a bare living they must drudge everlastingly, be "red-tape worms," and practice an extremely low quality of medicine.

Suppose the strike is ruled out by the Government as illegal. What then?

The Congenital Syphilis Problem

Dr. Walter Clarke, executive director of the American Social Hygiene Association, pleads for the early discovery and treatment of the 100,000 children estimated to have congenital syphilis. Not only can such children be spared deafness, bone deformities, mental illness and blindness, which disable and cause dependency, but through the prevention of such disastrous and costly defects taxpayers will be saved millions of dollars. Otherwise a large proportion of these children will end up in hospitals, a heavy burden on public relief and private charity for the remainder of their lives. If these cases are not found, chiefly through concerted and coordinated scrutiny of pregnant women and newborn babies by those responsible for venereal disease and maternal and child health programs, taxpayers must be prepared to pay huge sums for institutional maintenance, medical care, relief for unemployables and their families, services for the handicapped, and other specialized help for syphilitics unable to maintain themselves.

✚

The Editors offer the "Letters to the Editor" department as an open forum for the discussion of topical medical issues.

Readers are cordially invited to submit for publication any opinions or experiences they feel may be of interest to the medical profession.

All letters must be signed. However, to protect the identity of writers commenting on controversial subjects, names will be omitted when requested.

PUBLIC HEALTH, INDUSTRIAL MEDICINE AND SOCIAL HYGIENE

EARLE G. BROWN, M.D.*

Pathological and Physiological Factors Involved in the Treatment of Silicosis in Coal Mines

Burgess Gordon and H. L. Motley (*A. M. A. Archives of Industrial Hygiene and Occupational Medicine* 2:365, Oct. 1950) have found that in silicosis some of the symptoms of silicosis are due to interference with respiration caused by tissue reactions in the lung that are reversible. Intermittent positive pressure breathing, combined with the use of bronchodilator drugs and a wetting agent, such as cetylpyridium chloride (Ceepryn®) used as an aerosol, has given good results in the treatment of over 500 cases of anthrasilicosis. The treatments are given for fifteen or twenty minutes, two or three times a day, according to the patient's reaction; if there is fatigue or palpitation, the duration of the treatment is shortened and the dosage of bronchodilator drugs is reduced. This treatment is supplemented by the use of a special abdominal support which elevates the diaphragm; this method of elevation of the diaphragm is indicated especially for patients with "the long, flat type of chest," severe cough and difficulty in expectoration. In more than 50 per cent of the patients treated with positive breathing there was a marked increase of expectoration, the sputum being thick, tenacious and "black"; this was accompanied by a decrease in dyspnea, and in some cases by the entire disappearance of "asthma-like" attacks. Some men have been able to return to work. After a course of intermittent pressure breathing therapy, functional tests have shown an increase in maximal breathing capacity, which averaged about 20 per cent, but was much greater in some cases, and a slight elevation of vital capacity. Yet roentgenograms after such a course of treatment show no striking changes. The physiological improvement observed is to be attributed to improved alveolar aeration and bronchial drainage, due to the "rehabilitation" of lung tissues not "totally involved" in the pathological changes produced by silica.

COMMENT

In the experimental animal, dust tends to accumulate at the bifurcation of the bronchi and alveolar ducts, along the surfaces near the hilus and adjacent subpleural areas. Where aerosols were not used the lungs often showed many scattered atelectatic areas and the lumen of the many bronchi and bronchioles appeared obstructed by exudate intermingled with dust. With aerosols, these changes were either absent or greatly reduced. Nevertheless, aerosols carry down large particles but often leave finer, more harmful particles suspended. More efficient methods of dust control for the prevention of anthrasilicosis are urgently needed.

E.G.B.

Incidence of Subclinical Poliomyelitis in an Urban Area According to Age Groups

A. E. Casey and associates (*American Journal of Public Health*, 40:1241, Oct.

* Commissioner of Health, Nassau County, N. Y., Cons. Contagious Diseases, Meadowbrook Hospital, Hempstead, N. Y.

1950) report the study of poliomyelitis virus in the stools of 101 children known to have been in contact with a case of poliomyelitis (familial and non-familial contacts), 55 non-contact children from the same neighborhoods, and 104 "control" children from other neighborhoods. The virus was recovered from the stools in 54 of the contact children, 6 of the non-contact children, and 8 of the control children. In familial contacts 80 per cent of contacts one to five years of age showed poliomyelitis virus in the stools, and 75 per cent of non-familial contacts in this age group were positive. Of the 14 children in the non-contact and control groups who had the virus in the stools, 12 were one to four years of age. Nine of these 14 children were known to have had fever or symptoms indicative of subclinical poliomyelitis. From these studies it is concluded that the greatest "reservoir" of poliomyelitis is the ambulatory pre-school child one to five years of age, who harboring the virus in the throat or stools, brings the disease home to his parents or older brothers and sisters "rather than vice versa." On the basis of these studies in various areas of the city, it is also calculated that most children in Chicago have been infected with the poliomyelitis virus by their fourth birthday, and that perhaps 75 per cent have been infected twice by the sixth birthday. The occurrence of paralysis in poliomyelitis may be attributed to reinfection in sensitized persons or in those with poor resistance.

COMMENT

As early as 1913, Frost (Hyg. Lab. Bull. 90, Oct. 1915, Treasury Dept., U. S. P. H. S., Washington D. C.) intimated that the paralytic case of poliomyelitis may perhaps be considered as a complication or accident in the course of poliomyelitis; that the disease occurs throughout the world in an endemic form, particularly in large cities; that the population of the cities becomes immunized by subclinical infection early in life, usually before 5 years of age (since older children and adults are less frequently attacked); that the disease has the seasonal distribution of enteric and insect-borne diseases, but that it is transmitted largely by person-to-person contact. Stocks (J. Hyg. 32:219-239, 1932) estimated upwards of 100 sub-clinical cases to each paralytic case in endemic areas.

E.G.B.

Public Health Aspects of Atomic Energy

Abel Wolman (*American Journal of Public Health*, 40:1502, Dec. 1950) maintains that few health departments in the United States at present exercise any control over radiation equipment in either medical or industrial fields. Yet the atomic energy industry in this country has developed until its operations and expenditures are "larger perhaps than those of any other industry in the United States." Its operations and products have "significant" effects on both the workers in this industry and the general public. The author considers it "a major gap in health department responsibility" that so little has been done by health departments to study the possibility of ill effects and the methods of protecting the public health against such effects. Some believe that a federal health agency should control the matter, but the author is of the opinion that this is not only a departure from the usual principles and methods of health administration in this country, but also that as the problem increases more local supervision and control, rather than less, will be necessary. A few "professionals" familiar with the atomic energy field should be included in local and state health departments, who can develop rules of action for dealing with peacetime, as well as wartime, hazards of atomic energy.

COMMENT

The author discusses the role that the health department should play in control over radiation equipment in either medical or industrial fields. He mentions the major gap in health department responsibility in the study by health departments of the possible ill effects and the method of protecting the public against such effects. Certainly any local health department

would concur in the author's opinion that it is a problem of public health to control radiation equipment. A federal health agency, such as the U. S. Public Health Service, should be in the position to give state and local health departments the latest information available on the subject. Many of the public health problems of atomic energy, such as effects on food and water supplies, are apparently kept "top secret" and the information is not available to health departments whose duty would, of course, be to inform the public which foods or water supplies would be safe to use if they were subject to radiation. A definite program should be established whereby this information is made available in the immediate future.

E.G.B.

Pulmonary Carcinoma in Chromate Workers

A. M. Baetjer (*A. M. A. Archives of Industrial Hygiene and Occupational Hygiene*, 2:487; 505, Nov. 1950) presents a study of pulmonary carcinoma in chromate workers in two parts, first a review of the cases reported in the literature, and secondly a study of the incidence of pulmonary cancer in chromate workers based on the records of two Baltimore Hospitals (Johns Hopkins Hospital and Baltimore City Hospital.) The review of literature showed approximately 109 cases of cancer of the respiratory tract in men employed in the chromate producing industry, and 11 cases in those employed in the chrome pigment industry. These cases were reported in Germany and the United States. In a few cases the cancers were in the upper respiratory tract, but the majority were bronchiogenic carcinomas. In the German cases, no statistics of morbidity or mortality rates are available, but in the United States the reported studies indicate that the incidence of respiratory tract cancers was "significantly higher" in the chromate-producing industry than in comparable groups; and that pulmonary cancer occurred at a younger age in chromate workers than among other males in the United States. Laboratory studies on the pathogenesis of pulmonary cancer in chromate workers have not been made, but the reports indicate that the carcinogenic materials to which the workers are exposed are the hexavalent chromium compounds in dust. In the study of the records of the two Baltimore hospitals, it was found that the percentage of patients with lung cancer was significantly higher among those exposed to chromates than in the control groups in these hospitals; it was also found that the percentage of workers exposed to chromates who developed lung cancer was significantly higher than the percentage of such workers in the employed male population of Baltimore.

COMMENT

W. C. Hueper (Environmental and Occupational Cancer, Supplement 209, P. H. Reports, 1948) states that although the extent of chromate cancer hazard cannot be properly evaluated for lack of reliable data, he believes that it may be considerable.

According to L. Vaccaro (Indust. Med. 10:246, 1941) chromium ores, which are mined in South Africa, Turkey, Greece, and the Philippines, are extensively used for the production of armor plate, projectiles, gun carriages, axles, springs, cutlery, and other steel goods; as alloys of manganese, cobalt, tungsten, vanadium, and nickel; for the manufacture of high-speed tools, exhaust valves, turbine blades, roller bearings, and pump rods; in stainless steel processing; for pigment making in inks, paints, glass, and enamels; as oxidizers in aniline dye production; as mordants and tanning agents; for bleaching fats and oils; and for the plating of metal parts.

The only experimental evidence available is that offered by the German investigator; H. R. Schinz, who implanted metallic chromium in the thighs of rabbits and observed in some which survived for more than four years a few sarcomas at the site of implantation and some lung carcinomas.

E.G.B.

Rocky Mountain Spotted Fever on Long Island

H. K. Miller (*Annals of Internal Medicine*, 33:1398, Dec. 1950) reports a study of Rocky Mountain spotted fever on Long Island, where an endemic focus of this disease has been known to be present since 1912. The American dog tick (*Dermacentor variabilis*) has been found to be the principal vector of the disease

in this area. While this tick was introduced on Long Island between 1875 and 1898, the first clinically proved case of Rocky Mountain spotted fever was diagnosed in 1912; there was possibly a case in 1908. From 1912 to 1949, "approximately" 160 cases were reported. Clinically the disease has been essentially the same as in other parts of the United States; the case fatality rate was 14.5 per cent, lower than that in the western part of the United States, but this is due to the fact that there was a higher incidence in the first two decades of life in the Long Island case, and that the mortality is low in this age group. No real evidence has been found that the disease is increasing in Long Island; the apparent increase is attributed to better diagnosis and better reporting. While antibiotic therapy in recent years has reduced the mortality of the disease, and prophylactic vaccination has been found of value, especially for children, the best method for the control of Rocky Mountain spotted fever in this endemic area, in the author's opinion, is the "widespread application of D.D.T., especially along routes of animal and human travel.

COMMENT

There was a marked decrease in Rocky Mountain spotted fever in Suffolk County with only 9 cases reported during 1950. Nassau County had only one reported case for 1950.

Readers may be interested in the following recommendations pertaining to tick control made by the departments of health of both counties:

1. Adult ticks tend to congregate along well defined or easy routes of animal travel. They cling to tips of grass blades along driveways, garden paths, animal trails, roadsides, or along the edges of mowed lawns bordered by meadows or dense undergrowth. Ticks are very seldom found above knee height on the grass. They have a pronounced tendency to crawl rapidly upwards so that they are not noticed until they crawl on the neck and head.

2. While a small portion of ticks is infected, it is impossible to tell by simple observation whether the tick is or is not capable of transmitting spotted fever. Consider every tick a potential danger and remove it from the body as quickly as possible. Inspect the skin, particularly at hair lines on the neck and behind the armpits at least twice a day when exposed to ticks.

3. The tick must feed for several hours before it can activate the virus to transmit tick fever.

4. Removal of feeding ticks from dogs and humans must be done very carefully to avoid crushing the tick and inoculating the tick blood and material into the skin. Bare hands should not be used. A small piece of cloth, cotton, paper or tweezers held between the fingers will afford adequate protection.

5. Spraying of large areas with 2½ per cent DDT emulsions is impractical because the solutions must be made so weak to avoid injury to wild life that they are not effective against ticks. On residence property, places of heavy infestation can be located by dragging a piece of light colored flannel or an old dish towel over the grass along roadsides, driveways, and paths. The ticks brush off on the cloth, which should be examined every few feet. These small areas along the determined places of concentration of ticks may be sprayed without undue expense.

6. Preventive immunization with vaccine gives immunity for a relatively short time. It should be reserved for persons who must work in areas known to be heavily infested.

E.G.B.

The Role of Epidemiology in Venereal Disease Control

C. L. Hunt (*Canadian Journal of Public Health*, 41:485, Dec. 1950) describes methods employed in Vancouver to discover cases of venereal disease that are not found through venereal disease clinics, or contact-tracing. In spite of the effectiveness of penicillin and other antibiotics in the rapid treatment of venereal disease, there still remains a "pool of infection" in large urban centers. Studies in Vancouver indicated that this pool of infection is concentrated in "amateur and professional prostitutes"; also in a study of an unselected group of 150 cases of venereal disease (male and female) at one Vancouver clinic, it was found that 40 per cent of the patients had police records. It was arranged, through cooperation with the Police Department, that blood for Kahn tests should be taken each morning from female prisoners in the City jail who had been arrested during the previous day and night; this was soon extended to

include pelvic examinations and smears for gonococcus infections. Later Kahn blood tests were also made on male inmates. Among the males examined, 9 per cent had positive blood tests, and the great majority of these had been under treatment through the Venereal Disease Control Division, only 3 per cent representing new cases. Of the females examined 47.5 per cent showed evidence of venereal infection, and these represented chiefly new cases of gonorrheal infection. It is evident, therefore, that this jail examination center is of value in dealing with the "pool of infection" in a large city.

COMMENT

The writer of this comment recalls that during the six years (1919-1925) he served as the health officer of a midwestern city he made routine examinations for venereal disease on all prisoners arrested by police officers on charges of vagrancy and disorderly conduct. This is an additional method that may be used to further the venereal disease control program. E.G.B.

OBSTETRICS

HARVEY B. MATTHEWS, M.D., F.A.C.S.*

Amniotic Fluid Embolism, an Infrequent Cause of Maternal Death

H. W. May and F. D. Winter (*Surgery, Gynecology and Obstetrics*, 92:231, Feb. 1951) report a study of the causes of maternal death from 1940 to 1950 at the Charity Hospital, New Orleans. In this period there were 72,020 deliveries with 146 maternal deaths, a maternal death rate of 0.2 per cent. In all these cases the records were examined to determine if there were any symptoms or clinical findings indicating amniotic fluid embolism. Autopsy was done in 81 of these 146 cases, including a study of lung sections for such evidence of amniotic fluid embolism as the presence of keratinized squamous epithelial cells, vernix, mucin or lanugo hairs in the arteries, arterioles or capillaries of the lung. In no case was evidence of an amniotic fluid embolism found. This study was made because of the fact that since Steiner and Lushbough first reported amniotic fluid embolism as a cause of maternal death in 1941, 17 cases of this type have been reported and some of the authors claim that amniotic fluid embolism is "a common cause" of maternal death in labor or within the first ten hours after delivery. In the 81 cases of maternal death studied at autopsy by the authors, 58 of the patients died in labor. The fact that they found no evidence of amniotic fluid embolism in any case leads them to conclude that this type of embolism is "at best an infrequent cause of maternal death."

COMMENT

Any cause of maternal death deserves investigation. It is the sum total of all causes of maternal deaths that makes up our maternal mortality rate. Depending upon our knowledge of all causes, the total mortality rate will be proportionately high or low. Therefore, although amniotic fluid embolism is undoubtedly a very rare cause of maternal death, we believe that the authors are quite right in calling our attention to this possibility. We have seen only two cases proven by autopsy but no doubt those infrequent deaths during labor or immediately following labor that we have seen might have been due to amniotic fluid embolism. Autopsy has been more difficult to obtain in the past than it is nowadays. However, in the future we may find that amniotic fluid embolism is more frequent than we think. What to do about it is the "sixty-four dollar question". H.B.M.

* Emeritus Professor of Obstetrics and Gynecology, State University of New York (State University Medical Center at New York City College of Medicine); Consultant in Obstetrics and Gynecology, Long Island College Hospital, Methodist Hospital and Lake Placid General Hospital; Diplomate of American Board of Obstetrics and Gynecology.

Maternal States in Relation to Congenital Malformations

C. O. Carter (*Journal of Obstetrics and Gynecology of the British Empire*, 57:897, Dec. 1950) reports a study of congenital malformations in 14,913 deliveries, in which the mothers had attended the pre-natal clinic early in pregnancy and were not delivered prior to the 28th week; in this series 219 malformed children were born. The order of birth of the malformed child and the age of the mother were not found to have any effect on the incidence of malformations as a whole; the incidence of mongolism, however, was definitely associated with maternal age. None of the maternal conditions occurring early in pregnancy could be associated with a significantly increased incidence of malformations in the child; in the entire series there were only 2 cases of rubella occurring early in pregnancy, and both the children were normal in these cases. Rubella is the only illness that has been shown to be followed by a high incidence of congenitial malformations if it occurs early in pregnancy, but its occurrence in pregnant women is so rare, except perhaps in times of epidemic (as indicated by the findings in this series), that it probably is not the cause of more than 1 or 2 per cent of all congenital malformations. The author concludes that any maternal condition in the early months of pregnancy is in most cases "only adjuvant" to the genetic factors that predispose to the development of any particular congenital malformation.

COMMENT

Fortunately there are no diseases which may occur in the mother during the prenatal period, except rubella, that effects the incidence of malformations in the fetus. Moreover, not all cases of rubella cause malformations in the fetus. We have one case in which a normal fetus was delivered. The child is four years old and is normal in every respect. Congenital deformities, without doubt, are due to defective germ plasm in a given family. This is truly a shocking malady for the family to experience; albeit a fascinating, if perplexing, problem for the physician. Your commentator has only recently been faced with a grave decision. After three congenital malformed children within the last six years, a couple wished to know whether or not they should "try again". They did and a live normal child was the result. You never can tell. Statistics do not help. Nature apparently does not "bind her actions by man made rules". A normal baby is worth trying for, as this mother said, for "years and years". Happiness knew no bounds with this couple. H.B.M.

A Better Understanding of Uterine Contractility Through Simultaneous Recording With an Internal and a Seven Channel External Method

R. Caldeyro, H. Alvarez and S. R. M. Reynolds (*Surgery, Gynecology and Obstetrics*, 91:641, Dec. 1950) describe a method for studying uterine contractility during labor. The internal method employed records the pressure of the amniotic fluid; this measures the intensity of uterine contractions, "considered as a whole." For the external measurements of local activity of the uterus, seven receptors are placed on the abdominal wall over different parts of the uterus. By this means it was found that labor progresses most satisfactorily when the total uterine contractions as measured by the pressure of the amniotic fluid show a high intensity, raising the amniotic pressure more than 24 mm. Hg. above the level observed during relaxation. Also when the contractions of the fundus are of greater intensity than those of the midpart of the uterus, while the lower uterine segment shows little activity and when there is good "synchronization" between the different contracting parts of the uterus, and a regularity in rhythm and intensity of the contractions. If the uterine contractions do not show these characteristics labor progresses more slowly or may fail entirely.

COMMENT

This article is very technical. It is research of a high order and perhaps some day such research will solve a very perplexing problem—viz.: why do not all uteri have the same contractility? or when abnormal what can be done to render contractions normal? under what condition could uterine inertia be recognized? What a boon to treatment this would be! To know, without a test of labor, that a given uterus would not deliver a given baby. Seems too good to be true. But television was unknown only a short few years ago. God bless the researchers! And we should give them more money.

H.B.M.

The Morphological Changes in the Cervix During Pregnancy, Including Intra-epithelial Carcinoma

J. W. W. Epperson and associates (*American Journal of Obstetrics and Gynecology*, 61:50, Jan. 1951) report a study of 752 cervical biopsies from 286 patients during pregnancy; repeated biopsies were made in most of these cases, some biopsies being made at the time of delivery and post partum. In these cases the cervix was grossly normal. The findings showed that in pregnancy the stroma of the cervix shows increased vascularity and edema, increasing with the duration of pregnancy; at the time of delivery an infiltration of red blood cells also occurs. All these changes disappear rapidly after delivery. Over 50 per cent of the biopsies showed cervicitis, occurring both during pregnancy and the postpartum period. A stromal decidual reaction was found in 10.4 per cent of the prenatal biopsies, in 21 per cent of biopsies at delivery, and in 3.1 per cent of postpartum biopsies. The glandular epithelium of the cervix in pregnancy shows glandular hyperplasia, i.e., an increase in the number of glands; hyperplasia of the glandular epithelium; adenomatous hyperplasia, i.e., the formation of multiple small gland spaces within the larger glands; and epidermization, with the stratified epithelium growing beneath or replacing the columnar epithelium of the endocervical glands. This type of epidermization was found in 14.3 per cent of the prenatal biopsies, but in only 3 per cent of biopsies at delivery and 0.9 per cent of postpartum biopsies. The stratified squamous epithelium of the cervix in pregnancy shows edema and vascularity as well as the stroma of the cervix. Hyperactivity of the basal layer of the epithelium of the cervix was present in 14.7 per cent of biopsies in the prenatal period, diminishing rapidly after delivery. In this series, there were 2 cases in the prenatal biopsies that showed changes that would have been designated as "intra-epithelial carcinoma" in non-pregnant women. In an earlier preliminary study 3 similar cases were found in pregnant women. Two of these patients aborted spontaneously, 2 were delivered by cesarean section near term, and one was delivered normally at term. Postpartum biopsies in all cases showed normal epithelium; 2 of these patients have been followed for twenty months, 2 for eight months, and one for a month and a half, repeated cervical biopsies being normal.

Incidence and Effects of Vascular Disease in 1,000 Consecutive Pregnancies in Private Practice

R. A. Bartholomew and associates (*American Journal of Obstetrics and Gynecology*, 61:431, Feb. 1951) report a study of the incidence of vascular disease in 1,000 pregnancies and its relation to hypertension and toxemia. The diagnosis of latent or definite vascular disease was made by retinal examination early in pregnancy. In the retina the normal arteriovenous ratio is 2 to 3; a ratio of 2:3 to 1:2 indicates the mildest degree of vascular disease; it is associated with a slight increase in light reflex; this degree of vascular disease was found in 90 pregnant women in this series. A moderate degree of vascular

disease as indicated by an arteriovenous ratio of 1:2 to 1:3, definite increase in light reflex, and occasional arteriovenous compression, was found in 16 cases; severe vascular disease as indicated by greatly increased light reflex and numerous arteriovenous compressions, was found in only one case. Thus there were 107 cases of vascular disease of varying degree in this series, the majority of which (90) were of the mildest degree. Among the patients free from vascular disease, there were 23 cases of primary true toxemia; the majority of these patients (60.8 per cent) were fifteen to twenty-four years of age. In the patients with mild or moderate degrees of vascular disease, a superimposed toxemia developed in 11 cases; in the one patient with severe vascular disease pregnancy was terminated at the seventh week because of a dangerous hypertension. Of the 859 patients with normal retinal findings, none showed hypertension early in pregnancy or at term; and only 20 showed a diastolic pressure above 80 mm. Hg. at the end of the puerperium. Of the 106 patients with mild or moderate vascular disease, none had hypertension in early pregnancy, but at term only 9.3 per cent had a normal diastolic pressure; in most of these cases, the diastolic pressure was between 80 mm. and 100 mm. Hg. In 72.9 per cent of the patients the diastolic pressure returned to normal by the end of the puerperium but in 10 cases with superimposed toxemia, it did not return to normal. In cases with normal blood pressure early in pregnancy, retinal examination is of importance in determining the presence of vascular disease and the danger of hypertension late in pregnancy.

COMMENT

One of the few remaining pathologic states for which there is no "certain" explanation is the toxemia of pregnancy. The relationship between vascular disease in pregnancy and the toxemia of pregnancy is not so obscure. Dr. Bartholomew and his associates have done yeoman service in clarifying and systematizing certain clinical observations which are of inestimable help in the diagnosis and prognosis of the vascular complications of pregnancy. The most important of these is the ophthalmoscopic examination; such examinations must be done throughout the pregnancy, during labor and the puerperium. Experience in such examination is a prerequisite, of course, for good results. It is really remarkable how much an ophthalmoscopic examination tells you if performed frequently and by "one who knows". Your commentator has long "been sold" on this examination in relation to the severity of the toxemia of pregnancy. Dr. Bartholomew and associates have published two recent papers on this subject and every physician or specialist doing obstetrics should "digest" them thoroughly. The practical knowledge thus acquired will repay you many fold.

H.B.M.

GYNECOLOGY

HARVEY B. MATTHEWS, M.D., F.A.C.S.*

The Diagnosis of Early Carcinoma of the Cervix

G. W. Douglas and W. E. Studdiford (*Surgery, Gynecology and Obstetrics*, 91:728, Dec. 1950) report that between January 1, 1938 and March 31, 1947, only 3 cases of "preclinical" carcinoma of the uterine cervix were found at Bellevue Hospital, and one of these was found in a patient who had a total hysterectomy performed. From April 1947 to the first of January 1950, 16 cases of early carcinoma of the cervix

* Emeritus Professor of Obstetrics and Gynecology, State University of New York (State University Medical Center at New York City College of Medicine); Consultant in Obstetrics and Gynecology, Long Island College Hospital, Methodist Hospital and Lake Placid General Hospital; Diplomate of American Board of Obstetrics and Gynecology.

were found, 13 of which were intra-epithelial and 3 showed some degree of early invasion. In only one of these cases was a significant lesion found by inspection and palpation of the cervix. At the beginning of this study, the number of biopsies of the cervix was greatly increased, especially if the cervix showed any abnormal appearance at the squamocolumnar junction. Later the cytological study of cases was begun. For this purpose Ayre's wooden spatula was used to take cell smears directly from the cervix, which were studied by a trained cytological technician. In the 16 cases of early carcinoma of the cervix discovered in this period, the smear method was not used in the first 3 cases. In the 13 other cases, the smear was positive in all but 2 cases; in one of these cases most of the lesion had been removed at a previous biopsy; and in the other the staining of the smear was not satisfactory; this smear was later re-stained, and found to be positive for malignancy. The authors are of the opinion that this smear method should be much more frequently used in the study of the cervix; and that pathologists and technicians should be trained in the detection of malignant cells in such smears. Positive smears must always be checked by biopsy and curettage to determine the character and extent of the lesion. If these methods can be applied "on a large scale," the end results of treatment of carcinoma of the cervix should be greatly improved.

COMMENT

Early diagnosis still remains the "sheet anchor" in the successful treatment of cancer. Diagnosed sufficiently early we have the means of cure—surgery and/or irradiation. The authors' comments and technic for the early detection of carcinoma of the cervix are sane and timely. We certainly agree that the "smear method" should be more frequently employed and that more pathologists and technicians must be trained in the detection of malignant cells in such smears. When every physician handling women is convinced of the efficacy of such diagnostic smears the treatment of cancer of the cervix (also elsewhere in the body) will become far more successful. Remember! the "smear method", properly interpreted, gives you the very earliest diagnosis possible today. Use it! and sooner or later you will save a mother's life.

H.B.M.

Treatment of the Surgical Menopause with Estradiol Pellets at the Time of Operation

M. L. Brown and associates (*American Journal of Obstetrics and Gynecology*, 61:200, January 1951) report 38 cases in which hysterectomy and bilateral salpingo-oophorectomy were done and one or two 25 mg. estradiol pellets were implanted subcutaneously near the upper angle of the abdominal wound; 37 patients whose ovaries had been removed without implantation of estradiol pellets were followed up. It was found that the onset of menopausal symptoms was delayed as compared with the controls in those cases in which such symptoms developed after implantation of estradiol pellets. In 18 of 26 patients who had had two estradiol pellets implanted, no menopausal symptoms had developed ten to nineteen months (average 14.9 months) after operation; and in 9 to 12 patients who had had one estradiol pellet implanted, no menopausal symptoms had developed five to twelve months (average 9.2 months) after operation. There were no malignant lesions in this series of cases. Because of the possible carcinogenic effect of estrogens, the presence of a malignant lesion or even the "suspicion of malignancy" is a contra-indication to the implantation of estradiol pellets, until the lesion has been proven benign by histological examination; also estradiol implants should not be employed unless a total hysterectomy has been done, on account of the danger of stump carcinoma. Other contraindications are endometriosis and possibly malignant breast lesions. In other cases of total hysterectomy and salpingo-oophorectomy in women before the menopause, the im-

plantation of estradiol tablets in the abdominal wound has been found of definite value in delaying, modifying or entirely preventing the development of menopausal symptoms. But this procedure is not necessary in women operated on after the menopause.

COMMENT

Excellent results have been obtained by many gynecologists and others by the use of "pellets" containing estrogens. These are implanted in "favorite spots" almost anywhere over the body. The authors, using pellets of estradiol—(25 to 50 mgs.)—in 38 cases of surgical menopause obtained excellent results by implanting the pellets into the upper angle of the abdominal wound. Menopausal symptoms were delayed five to twelve months following operation. We have not used the estrogens in this manner but after a considerable experience with hypodermic and/or oral preparations we can vouch for their efficacy. It would seem to us, under present conditions with standardized potent estrogens, the implantation of pellets is unnecessary. Why not give such estrogens as are needed the easiest way? Why use a complicated method when a simple one will "do the trick"? Do not surmise that I am "agin pellets"; I am not. Use them if you like: but be careful of your technic. We have seen one very severe infection in the thigh of a patient who had been given "pellets" containing an estrogen.

H.B.M.

Histopathological Changes in the Cervix Associated with Hyperplasia of the Endometrium

A. R. Bainborough (*American Journal of Obstetrics and Gynecology*, 61:330, Feb. 1951) reports a study of 26 cases of carcinoma of the cervix in which the endometria were available, in comparison with 56 cases of metaplasia of the cervix and 84 cases of hyperkeratosis of the cervix in which the endometria were also available. In the 26 cases of carcinoma of the cervix, there was hyperplasia of the endometrium in 13 cases, or 50 per cent; in 4 cases in postmenopausal women, there was endometrial atrophy; and in 9 cases a normal endometrium. In 56 cases of squamous metaplasia of the cervix, there was associated metaplasia of the endometrium in 25 cases, or 44.8 per cent, postmenopausal atrophy in 16 cases and normal endometrium in 15 cases. In 84 cases of hyperkeratosis of the cervix, there was atrophy of the endometrium in 32 cases, hyperplasia of the endometrium in 25 cases, or 29.3 per cent, and normal endometrium in 27, or 32.1 per cent. On the basis of this study the author concludes that carcinoma of the cervix and squamous metaplasia of the cervix are more frequently associated with hyperplasia of the endometrium than with a normal endometrium. As hyperplasia of the endometrium is considered evidence of hyperestrinism, it appears that the cervical changes may also be induced by hyperestrenism but some other factor, "as yet unknown," is necessary for carcinoma to develop. Hyperplasia of the endometrium, however, may be regarded as "an alert signal" for cervical carcinoma as well as for carcinoma of the corpus.

COMMENT

The association of hyperplastic endometrium of the corpus uteri with squamous metaplasia of the cervix is not uncommon—in fact, quite common, as shown by the author's figure of 44.8%. Whether this association is significant in relation to the occurrence of cancer in such cases is "as yet unknown". There undoubtedly is another factor implicated. We can agree with everything Dr. Bainborough says in this very interesting article. Those of you interested in pathology—and every physician should be—will find much "food for thought" in it. Be sure and read it!!

H.B.M.

Radiation Therapy of Carcinoma of the Vulva

F. Buschke and S. T. Centril (*Radiology*, 56:193, Feb. 1951) report 10 patients with carcinoma of the vagina treated by radiation since 1939; 6 of these are living and free from demonstrable disease for more than three years, 5 of them for more than four years. Four have died, all within two years after treatment, one with metastases, and 3 with extensive uncontrolled

local disease; one of these patients had incomplete treatment, no local radium, because of her poor general condition. All of the 6 surviving patients were treated with external roentgen-ray therapy and local radium. The roentgen radiation was given through oblique fields centered toward the vagina; for the local radium application, ovoids were used. None of these patients developed a fistula, or any severe degree of reaction in the bladder or rectum; all are in good health except that there is marked vaginal stenosis. From the Institut du Radium, 31 cases of carcinoma of the vagina have been reported; 16 of these patients are living without symptoms three years or more; of 20 patients in stages I and II, 15 are living and well. Of the 15 patients who have died, all but 2 died within two years with the local lesion uncontrolled; 2 died in four years from liver metastases. Only 3 of Institut du Radium cases were treated with intervaginal application of radium alone; in all other cases either external roentgen-ray therapy or teleradium was employed with or without local radium therapy. Poor results in radiation therapy of carcinoma of the vagina reported by others is attributed to inadequate external irradiation.

COMMENT

Carcinoma of the vulva, up until a few years ago, was almost an impossible proposition. Most cases came to diagnosis late when no form of treatment did much good. Metastases had long flourished. However, I should say for the past ten years, due to the educational efforts of all cancer societies, particularly the American Cancer Society, we are getting these cases earlier and therefore successful treatment is the rule rather than the exception. Surgical and/or radiation therapy is indicated. Take your choice. One must be sure, in any case, that the surgeon and/or the radiologist "know their job". After "all is said and done" the patient who goes to her family physician early certainly expects him to make the diagnosis (or have it made) "stat", which means immediately. Furthermore, there must be no lag between the diagnosis and treatment. Thirty-four years ago your commentator said in a lecture to a lay group: "Early diagnosis is the keystone in the treatment of cancer". Today "early diagnosis" has the same significance. Who is in the best position to make the diagnosis early? The family physician. Become "cancer conscious" and you will always be looking for cancer. What you look for you may find.
H.B.M.

Vulvovaginal (Bartholin) Cyst: Treatment by Marsupialization

Philip Jacobson (*Western Journal of Surgery, Obstetrics and Gynecology*, 58:-764, Dec. 1950) describes a method of treatment of Bartholin cyst. He has found that excision of the Bartholin gland with the cyst deprives the perineum of a secretion that is of physiological importance; and in cases in which both glands are removed, it may cause dryness around the vulva and discomfort to the patient. The operation for excision of the cyst also involves certain dangers, and treatment by incision and drainage is not always successful. The author has treated 19 cases of Bartholin cyst by an operation in which the cut edge of the cyst wall is sutured to the skin of the labia using fine catgut sutures. This is in effect a marsupialization; the cyst is drained and "becomes a duct again;" the function of the gland is preserved. The lumen of the duct and the stoma are larger than normal, but this has not resulted in any excess secretion in the author's experience. This operation was first done five years ago, and the patient has no discomfort of any kind. The results in the other 18 cases have been equally satisfactory.

COMMENT

Bartholin cysts are not as common, at least in our community (New York City area), as formerly. The newer methods of treating vulvovaginal infections is probably the reason. Certainly the modern treatment of gonorrheal infection is nothing short of miraculous. The gonococcus is destroyed early if discovered early and hence infection of Bartholin's cyst is not likely to occur. Likewise for other infections in this region. We have had no experience with the author's method of marsupialization in the treatment of vulvovaginal cysts. We have

stuck to the old method of complete surgical excision and have no reason to change. Incision and drainage for the very acute abscessed cyst; excision later if and when a cyst re-forms. Never incise a chronic vulvovaginal cyst; it will almost invariably recur. Always incise and drain an acute abscessed cyst and it may or may not recur—frequently it does. Marsupialization, if you prefer. Relief is what the patient needs; the method is not important to her. The physician makes the choice of that method he thinks best.

H.B.M.

Extra-Ovarian Brenner Tumour

T. G. Robinson (*Journal of Obstetrics and Gynaecology of the British Empire*, 57:890, Dec. 1950) reports a case in a woman sixty-four years of age in whom a palpable mass was found in the left lower abdomen thought to be a uterine fibroid or an ovarian tumor adherent to the uterus. At operation, a tumor was removed from the left broad ligament. On pathological examination, it showed the typical histologic characteristics of a Brenner tumor. Brenner tumors are comparatively rare tumors of the ovary, and the author finds no other case reported of an extra-ovarian Brenner tumor. The presence of this tumor on the broad ligament supports the theory of Meyer who maintained that the Brenner tumor arises from the cell nests described by Walthard in 1903, which are found on the surface of the Fallopian tube and broad ligament as well as on the surface of the ovary.

Allergenic Reactions from Inert Ingredients

Randolph reported in *Annals of Allergy* [9:173 (1951)] certain inert diluents and excipients used in pharmaceutical dosage forms are not so inert for many allergenic people. The author mentioned such ingredients as lactose, corn starch, corn sugar, sucrose, gelatin, liver extract, gum tragacanth, and certain oils and wax as being the hidden cause of allergenic reactions in people. Although the Food, Drug and Cosmetic Act does not require the inclusion of such ingredients on the label, it was suggested by the author that such inclusion would avoid much distress for many allergenic people.

Tromexan as a Hypoprothrombinemic Agent

Burke and Wright, in the February 1951 issue of *Circulation*, report their studies on the action of Tromexan, a coumarin substance. Satisfactory hypoprothrombinemic effect was demonstrated in rabbits. Then 24 normal human subjects were given a single dose ranging from 1200 to 1800 mg. Twenty-four hours after receiving 1500 to 1800 mg., the subjects exhibited uniform elevation of the prothrombin time to between 20 and 30 seconds. No toxicity was noted in any of the normal subjects.

Next 112 patients with various forms of thrombo-embolism were treated. The only toxic effects, three instances of microscopic hematuria and one case of deterioration of liver function tests, occurred in patients with pre-existing disease. The initial dose for these patients varied from 1200 to 1800 mg. The maintenance dose was usually 600 to 900 mg. per day, in divided doses for some patients. Twenty-four hours was the maximum interval between doses. Two patients with renal disease exhibited unusual sensitivity to Tromexan. The authors conclude that Tromexan is an effective hypoprothrombinemic agent and that "regulation of the patient on Tromexan is usually easier than that of the patient on Dicumarol because each prothrombin test is a direct reflection of the dose given the previous day."

Medicolegal Aspects of Practice

T. M. LARKOWSKI, M.D., F.A.C.S.*
A. R. ROSANOVA, M.D.**
Chicago, Ill.

Every physician should be familiar with certain legal considerations in professional practice. Although laws are designed to protect the public against charlatans and quacks, no physician is immune to a malpractice suit unless he never sees a patient. Therefore, in addition to carrying professional liability insurance, a medical practitioner can protect himself further by acquisition of knowledge of the law and how to avoid malpractice accusations.

Negligence consists of failure to act with proper care toward a fellow human being. Malpractice may be regarded as negligence in professional practice and involves a patient and a physician. It implies that the physician has failed to exercise proper care and has not met accepted standards of practice; this has resulted in patient injury.

Malpractice Suits In a malpractice suit the burden of proof rests upon the plaintiff—the patient. He must prove first, that the relationship of doctor and patient existed at the time of the act; second, that professional negligence was involved; third, that an injury resulted; and fourth, that the negligence caused the injury.

A physician, if he observes certain precautions, may do much to avoid the possibility of a suit for malpractice. The following points are some of many that should be kept in mind by the medical practitioner.

Precautionary Measures He should have a knowledge of the degree of skill and learning expected of him and other doctors in his vicinity, and he should keep up-to-date on modern medical advances. If he is classified as a specialist, his skill and knowledge in his field are expected to be greater than that of a general practitioner.

He should be just and careful in criticism of fellow doctors. Unethical criticism of others not only engenders malpractice suits but also lowers the profession in the eyes of the public.

He should be sure of diagnoses and require laboratory tests and x-ray examinations when necessary.

He should keep careful and complete records.

He should not promise too much in prognosis and avoid positive or absolute predictions.

He should leave x-ray therapy to the trained x-ray therapist.

He should arrange for a doctor to take his place if he is absent from his practice. Above all he should not abandon a patient without giving especial consideration to the correct termination of the patient-physician association.

He should obtain consent (preferably written) of the patient for operation or treatment, except in emergencies when the life of the patient is in danger.

* Late Professor of Clinical Surgery, Stritch School of Medicine, Loyola University, Chicago, Ill.
** Clinical Instructor, University of Illinois Medical School, Chicago, Ill.

He should insure the presence of a third person at examinations of female patients to protect against undue familiarity claims.

In certain cases the facts speak for themselves *(res ipso loquitur)*, and expert testimony on behalf of the patient is not necessary to establish departure from accepted standards. These include broken needles or foreign bodies present in the patient's body after surgery or treatment and infection or injury resulting from the use of unsterilized instruments or faulty apparatus. Special care should be exercised in these instances.

Employees of a doctor acting on his behalf or under his supervision are his liability. This also includes hospital personnel under his direct control.

Legal Rights If a physician should become the subject of a malpractice suit, prompt and proper action and a knowledge of his rights can do much to defeat unjustified claims. Legal advice should be sought immediately. No admission of fault should be made either to the patient or to a third party. A knowledge of the application of the Statute of Limitations in the vicinity should be sought. Any matter which has been previously considered and decided in favor of the physician may not be made the subject of a second complaint *(res adjudicata)*. Failure of a patient to return for treatment, if so directed, does not constitute professional negligence. A patient who, through his own negligence, contributes to the injury has little prospect of success in a malpractice claim.

Court Action An ethical, conscientious medical practitioner need not fear court action if he takes adequate precautions. However, unfounded suits sometimes are filed and can be effectively combatted only by careful attention to protective details while treatment is being administered. In law as in medicine, preventive measures are effective only before the appearance of the disease—in this instance, the malpractice suit.

The Doctor on the Witness Stand A physician may find himself on the witness stand in one of two capacities, as a witness to facts or as an expert witness. A fact witness is expected to testify only as to facts and not to give opinions. An expert witness is asked for opinion and may properly express it.

The appearance and conduct of a witness may do much to influence the outcome of a case. A good witness is of good character, agreeable, intelligent, pleasant, sympathetic and courteous. He should use common sense in all matters whether or not they involve medicine.

Some *don'ts* for witnesses are:

(1) Don't be afraid
(2) Don't volunteer
(3) Don't advocate
(4) Don't lose temper

Some positive actions characteristic of an effective witness are:

(1) Come prepared
(2) Be natural
(3) Tell the simple truth
(4) Be attentive to questions
(5) Speak loudly and distinctly

Criminal Law A number of definite laws make certain acts illegal, and the breach of these is not classed as malpractice but as criminal acts. These pertain to abortions, narcotics, contraceptives, practicing while intoxicated and execution of false records such as death certificates. Criminal action need never be initiated, provided the physician is careful to acquaint himself with these laws and keeps within their limits at all times. All cases of bullet wounds, altercations, accidents, abortions or narcotic violations must be reported to local authorities at once.

Recovery of Fees for Professional Services No revelation of the patient's condition need be made in suit for professional service. However, the Statute of Limitations applies to such charges.

From Larkowski and Rosanova's "Hospital Staff and Office Manual".

MEDICAL BOOK NEWS

Parasitology

L'Amibiase. Étude Clinique et Thérapeutique. By Francois Blanc, M.D. & Fred Siguier, M.D. Paris, L'Expansion Scientifique Française, [1950]. 8vo. 634 pages, illustrated.

This volume is a systematic presentation of the clinical and therapeutic aspects of amebiasis. It contains an excellent discussion of the pathogenesis of the disease and a good working classification. The diagnosis and treatment of each clinical form of amebiasis are presented. The conclusions drawn are based on the personal experience of the authors and appear to be sound.

The book is recommended as a comprehensive reference work for those concerned with amebic infections.

EDWIN P. MAYNARD, JR.

Gastroenterology

Postgraduate Gastroenterology. As Presented in a Course given Under the Sponsorship of the American College of Physicians in Philadelphia December MCMXLVIII. Edited by Henry L. Bockus, M.D. Philadelphia, W. B. Saunders Co., [c. 1950]. Large 8vo. 670 pages, illustrated. Cloth, $10.00.

This volume is a record of the transactions of the American College of Physicians course in gastroenterology, given at the Graduate Hospital University in Pennsylvania, under the direction of Dr. Henry L. Bockus. The list of contributors is an impressive roster of Who's Who in gastroenterology in Philadelphia, plus a number of specialists imported for the occasion.

The topics discussed include oesophageal disorders, peptic ulcer, gastric neoplasms, psychiatric implications of gastrointestinal disorders, a symposium on the pancreas, liver disorders, ulcerative colitis, non-specific enteritis and enterocolitis. intestinal obstruction, carcinoma of the colon and a symposium on abdominal pain.

The sections on abdominal pain, liver disorders and peptic ulcer are especially excellent, but the whole volume is highly recommended.

CHARLES G. WILLIAMSON

Gynecological Pathology

Essentials of Obstetrical and Gynecological Pathology. By Robert L. Faulkner, M.D. and Marion Douglass, M.D. 2nd Edition. St. Louis, C. V. Mosby Co., [c. 1949]. 8vo. 357 pages, illustrated. Cloth, $8.75.

This is an excellent textbook for the medical student and intern as well as for a refresher course for the general practitioner. The pathological descriptions are well integrated with the clinical findings, giving a clear picture of the conditions under discussion.

This new edition amplifies many of the conditions described in the first edition and contains more profuse and better illustrations.

This book should be available in every hospital gynecological department for intern training.

WINFIELD E. STUMPF

—Continued on page 662

"Despite the spectacular suppressive effects obtained by . . . ACTH and Cortisone . . . the basis of treatment must continue to be the simple, readily available and inexpensive measures that will alleviate pain, minimize deformity and maintain ambulation."

Pruce, A. M.: J. Med. Ass. Georgia 40: 101, 1951

Arthritis

Available: **SULPHOCOL** Capsules for oral use in bottles of 100 and 1000. Dose 1 capsule three times daily.

SULPHOCOL SOL for parenteral use in 25 cc. multiple-dose vials and boxes of 12-2 cc. vials. Dose: Ascending doses every 3 to 7 days starting with 0.25 cc.

SULPHOCOL—Colloidal Sulfur Compound—meets these requirements. By its detoxifying action it reduces joint swelling and thus lessens pain; further joint involvement is prevented or minimized. It is comparatively inexpensive. Moreover, it is safe.

Over a period of years SULPHOCOL has given gratifying relief to thousands of arthritis patients. Clinical experience is ample proof of the efficacy and safety of this form of therapy. It has stood the test of time.

Write for literature and sample of Sulphocol Capsules.

SULPHOCOL®

Colloidal Sulfur Compound

Oral and Parenteral

MULFORD COLLOID LABORATORIES

A PRODUCT OF THE MULFORD COLLOID LABORATORIES

THE NATIONAL DRUG COMPANY, PHILADELPHIA 44, PA.

More Than Half a Century Service to the Medical Profession

—Continued from page 660

Radiation Therapy

Clinical Radiation Therapy. Edited by Ernst A. Pohle, M.D. 2nd Edition. Philadelphia, Lea & Febiger, [c. 1950]. 8vo. 902 pages, illustrated. Cloth, $15.00.

Dr. Pohle has, in editing a revised second edition, changed the title from *Clinical Roentgen Therapy* to *Clinical Radiation Therapy*, thus more clearly entitling the increased scope of this volume.

The authors have given an authoritative compendium of radiation therapy in all its ramifications. It should give the surgeon and the internist some comprehension of the many advantages and applications of radiation therapy. The medical student as well as the radiologist can read this volume to gain increasing knowledge of the subject. The radiologist is urged to read carefully the chapter "Dosage Calculations in Radium Therapy" as well as Martin's chapter "Low Intensity Radium Needles." All radiologists as well as physicians practicing medicine in any of its aspects should read the chapter "Radiation Reactions and Injuries" by MacKee and Cipollaro as well as Donaldson's chapter, "The Civil Liability of the Radiologist."

WILLIAM E. HOWES

Tuberculosis

Os et Tuberculose. By Robert Kaufmann. Paris, L'Expansion Scientifique Française, [1950]. 8vo. 152 pages, illustrated.

The author has developed the revolutionary idea that osseous tuberculosis is secondary to glandular tuberculosis, whether abscessed or not, and that it suffices to suppress the glandular focus in order that the osseous lesion heal of itself.

Tuberculosis of the ribs, cartilages or sternum never begins in the center of the bone. It develops in the neighboring lymphatics. The treatment therefore is the ablation of the lymphatic tuberculoma, resection of the internal mammary or intercostal chains. The author never cuts into the bone.

He develops a similar thesis for tuberculosis of the spine, Pott's disease, and states that early operation before bony destruction takes place will result in a cure. Many cases are presented to support the author's contention.

Before Dr. Kaufmann's ideas can be accepted much work needs to be done. Nevertheless this volume should be of great interest to those working with tuberculosis.

EDWIN P. MAYNARD, JR.

Clinical Dietetics

Bridges' Dietetics for the Clinician. By the Late Milton Arlanden Bridges, M.D. 5th Edition thoroughly revised and edited by Harry J. Johnson, M.D. Philadelphia, Lea & Febiger, [c. 1949]. 8vo. 898 pages, illustrated. Cloth, $12.00.

Dr. Johnson has taken on the task of periodically bringing up to date the excellent book on clinical dietetics which Bridges wrote some 15 years ago.

There is a small introductory chapter devoted to the physiology of digestion and metabolism. Following this, the book is concerned purely with dietetics and includes chapters on vitamin factors in diet and a summary of the components and functions of foodstuffs.

The major portion of the book is devoted to the dietetic management of diseases. Each chapter in this section is a contribution by a recognized authority in his particular field. The whole volume is well done and contains every phase of diet in disease which the physician may encounter in his practice. It is a ready source of reference for any menu and dietetic principle. This book is highly recommended to the general practitioner.

WILLIAM S. COLLENS

—Concluded on page 664

Problem Patient

quadragenarian cut-up . . .

CUNNINGHAM CUDDLE rollicks and romps to homecoming rallies and class reunions, resolved to rekindle the embers of youth with a wassail or two for old Siwash.

Meanwhile, Mr. Cuddle belabors the quality of the whiskey these days and carps about cardialgia.

Not that good old Cuddle, '25, could be considered a clinical curiosity in this age of chronic escapists. On the contrary, he merely typifies another common species of familiar problem patients — the superannuated sophomores whose soma aren't quite up to their psyche. Like the hurriers and worriers and bridge-luncheon butterflies, they bedevil their doctors with a sad lament anent chronic "indigestion," but cling to their merry or morbid course defying the dues of indulgence.

There's no one way to handle the Cunningham Cuddles and company with their aversion to acting their age. But it's said that "the commonest cause" of digestive distress in patients over forty is low grade biliary dysfunction. And such being the case, DEPANCOL will often serve an important two-fold purpose: (1) To afford prompt relief from the classic complaints — flatulence, bloating, dyspepsia, etc. — thus encouraging the patient's early cooperation in a long-range corrective program; and (2) To flush and activate the sluggish biliary system, thus encouraging restoration of normal function by physiologic means.

Depancol®

Dehydrocholic Acid	½ gr.
Bile Salts	1½ gr.
Pancreatic substance equivalent to Pancreatin U.S.P.	4½ gr.
in an enteric coated tablet	

Note: no laxatives

SUPPLY Bottles of 50, 500, and 5,000 enteric coated tablets, available at your druggist.

DOSAGE Average: 1 or 2 tablets 3 times daily, with or after meals.

CHILCOTT *Laboratories*

DIVISION OF The Maltine Company

MORRIS PLAINS, NEW JERSEY

HEMORRHAGE IS UNPREDICTABLE . . .

Authorities recognize that a simple trickle may continue indefinitely and prove as baffling as a furious fountain of blood which suddenly stops.

KOAGAMIN'S action is normally predictable because of its direct action on the blood. KOAGAMIN acts fast—in minutes—unlike vitamin K, useful only in cases of prolonged prothrombin time. In such cases, vitamin K may be used with KOAGAMIN to effect faster control.

1. De Lee-Greenhill, Principles and Practices of Obstetrics, 8th Ed., p. 803, W. B. Saunders, 1943

KOAGAMIN

(An aqueous solution of oxalic and malonic acids for parenteral use.)
in 10 cc. diaphragm-stoppered vials
Comprehensive dosage chart and literature on request

THERAPEUTICALLY effective in many hemorrhagic conditions

PREOPERATIVELY minimizes oozing, assures a clearer field for surgery

POSTOPERATIVELY aids control of secondary bleeding . . . quickly, safely

Chatham

Available Through Your Physician's Supply House or Pharmacist

CHATHAM PHARMACEUTICALS, INC. NEWARK 2, NEW JERSEY, U.S.A.

MEDICAL BOOK NEWS

—Concluded from page 662

Atomic Medicine

Industrial and Safety Problems of Nuclear Technology. Edited by Morris H. Shamos & Sidney G. Roth. With contributions by P. C. Aebersold, J. S. Balderston, D. S. Ballantine, G. Dean, et al. New York, Harper & Brothers, [c. 1950, New York University]. 8vo. 368 pages, illustrated. Cloth $4.00.

This book had its origin in a conference on Industrial and Safety Problems of Nuclear Technology, sponsored jointly by the Atomic Energy Commission and New York University, in January, 1950. The articles, by experts of eminence, were designed to introduce interested laymen to the nature and practical applications of nuclear radiations and radioisotopes and to the associated industrial and social problems. Chapters on applications of radioisotopes to biology and medicine, on problems in the setting up of a radiochemical laboratory, and on safety precautions in the care of personnel should be of interest to physicians newly introduced to this rapidly evolving field. Here is a highly readable, broad orientation in the constructive applications of atomic energy.

HAROLD MANKIN

Obstetrics

Natural Childbirth. A Manual for Expectant Parents. By Frederick W. Goodrich, Jr., M.D. New York, Prentice-Hall, [c. 1950]. 8vo. 176 pages, illustrated. Cloth, $2.95.

This is an extremely lucid explanation of the physiology of pregnancy and childbirth which should do much to ease the discomforts and doubts of normal pregnancy for the average woman. As a simple description of normal pregnancy, labor and puerperium the book is excellent. It would be better without its opening chapter on the torture of conventional labor and delivery as contrasted with the delights of "Natural Childbirth".

The book can be read with profit by anyone practicing obstetrics.

WINFIELD E. STUMPF

Bellaspro brings prompt and effective relief from the common aches and -algias . . . turning what might have been a wasted, pain-ridden day into one of comfort and accomplishment.

For relief of headaches, dysmenorrhea, neuralgia, myalgia, sciatica, lumbago:

BELLASPRO®

Belladonna Alkaloids	0.0714 mg.
Equivalent in alkaloid content to 3.8 minims Belladonna Tincture	
Caffeine	½ gr.
Acetophenetidin	2½ gr.
Acid Acetylsalicylic	3½ gr.

Supplied in bottles of 100, 500 & 1000 tablets

BELLASPRO® *with Codeine

No. 1 with ¼ gr. codeine phosphate
No. 2 with ½ gr. codeine phosphate

Supplied in bottles of 100 and 500 tablets
*Narcotic order form required

Rationally formulated for rapid relief of pain

VANPELT & BROWN, INC. • *Pharmaceutical Chemists* • **RICHMOND, VIRGINIA**

MODERN THERAPEUTICS

Propylene Glycol Injection of Quinine Sulfate

The intramuscular injection of quinidine sulfate in propylene glycol was studied in an effort to circumvent the gastrointestinal irritation occurring from oral administration and the local, painful reaction occurring from the intramuscular injection of an aqueous solution given in the treatment of disorders of cardiac rhythm. Gluck *et al.* reported in *J.A.M.A.* [*145*:637 (1951)] that a 20 per cent solution of quinidine sulfate in propylene glycol was given to 19 patients by intramuscular injection. A single injection of from 0.2 to 0.6 Gm. was given to 12 of the patients in order to study the local reactions. The remaining 7 patients were given multiple injections and the effect of the preparation on the heart curve was studied.

The authors found that when pain occurred at the site of injection, it was slight and of short duration. In 2 of 3 patients receiving 12 or more injections there was some swelling of the soft tissues but no pain, induration or slough. They also found that the curve of action of quinidine in this form was essentially the same as that given by oral administration. The peak effect was obtained in about 3 hours and the effect had completely disappeared within 24 hours.

Gallamine Triethiodide as an Adjunct to Electroplexy

The use of the muscle relaxant Gallamine triethiodide (tri-(ethylaminoethoxy)-benzene triethyliodide) was studied in patients requiring electroplexy in whom there were physical abnormalities, such as severe rheumatoid arthritis, and hypertension as contraindications to such treatment. Smith and Thomas reported in *Brit. Med. J.* [*No. 4711*:860 (Apr. 21, 1951)] that the intravenous injection of 60 to 100 mg. of the drug produced complete paralysis of the flexor muscles of the forearm and of the foot within 3 to 5 minutes. Complete relaxation of the abdominal muscles occurred in about 3 minutes.

After the induced fits, which were in no way impaired, recovery was rapid and was complete within 20 to 30 minutes of the full dose. In 2 patients the paralysis was completely abolished in 10 to 15 minutes by the injection of 1 mg. of neostigmine. The drug produced no fall in blood pressure but a mild cyanosis from temporary apnoea occurred in several cases.

Cellothyl in Pediatric Bowel Dysfunctions

Edward E. P. Seidmon, reporting in the September, 1951 issue of *American Journal of Digestive Diseases* found Cellothyl effective in correcting a variety of bowel disorders in a series of thirty-seven pediatric patients ranging in the age group from 7½ months to 13½ years.

Sixteen children complained of constipation alone, two suffered from diarrhea, nineteen exhibited several symptoms of which constipation was one, seventeen of the children had allergies, and seven had an increase in the calibre of the colon, or pseudomegacolon.

Children were placed on an anticonstipation diet where indicated, and were given 1½-3 grams of Cellothyl daily. In the allergic children, skin tests were made and elimination diets or desensitization carried out as necessary.

In all cases of simple constipation and diarrhea, rapid improvement was noted

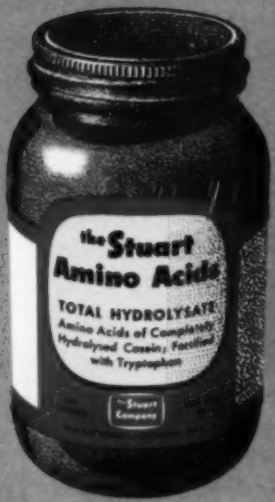
—Continued on page 64a

ONE *tablespoonful* **T·I·D**

can in many cases change your patient from negative to positive nitrogen balance

THE Stuart Amino Acids

(SOLUBLE BEAD FORM)



CONTAINS ALL THE AMINO ACIDS AND ONLY AMINO ACIDS IN CORRECT RATIO TO MAINTAIN NITROGEN BALANCE

Bland taste and **complete solubility** mean **better results.**

Patients are more cooperative in taking The Stuart Amino Acids in either maintenance or massive dosage and for the length of time you prescribe.

the Stuart Company

6 OUNCE BOTTLES AVAILABLE AT ALL PHARMACIES

CAN BE TAKEN IN  LARGE OR SMALL  AMOUNTS OF LIQUIDS,

 HOT OR COLD  WATER, SOUPS 

TOMATO  OR VEGETABLE JUICES,  CARBONATED BEVERAGES

THE STUART HEMATINIC with FOLIC ACID and B12

Gives your patient the advantage of both Crystalline B12 and B12 Concentrate

Other advantages: **Ferrous gluconate** (for greater iron tolerance and utilization). ★ **Therapeutic amounts of B complex and C** ★ **Desiccated Liver** (for natural B complex) ★ **Copper** ★ **Tablet form** to release iron at desirable rate in stomach for better tolerance. ★ **Low cost to patients**

PASADENA CALIFORNIA · the Stuart Company · CHICAGO ILLINOIS

AVAILABLE AT ALL PHARMACIES BOTTLES OF 100 CAPSULE-SHAPED TABLETS

6 TABLETS—Average Daily Dose—CONTAINS:

FERROUS GLUCONATE	18 grains
COPPER SULPHATE	15 mg.
B COMPLEX	
Desiccated Liver *(Natural B Complex)*	30 grains
Thiamin Chloride	20 mg.
Riboflavin	10 mg.
Niacin Amide	150 mg.
Calcium Pantothenate	10 mg.
Pyridoxin Hydrochloride	3 mg.
Folic Acid	4.5 mg.
B_{12} {50% USP Crystalline / 50% B_{12} Concentrate}	12 mcg.
VITAMIN C (ascorbic acid)	150 mg.

Never available before

- such control of staining
- such welcome convenience[1]

in **gentian violet** therapy

for **monilial vaginitis**

gentia·jel

single-dose disposable applicators

a 2 year study[1] at Margaret Hague Maternity Hospital clearly proved **gentia-jel** a most effective, convenient, safe form of gentian violet. Single-dose disposable applicators deposit **gentia-jel** jelly **inside** vaginal tract with a minimum of staining, soilage, fuss.

Safe, non-irritating, for home use even through late pregnancy.

93% combined cure and improvement...used during the last trimester of pregnancy **gentia-jel** cured 149 (78%) of 191 women with vaginal mycosis...most within 2 weeks. Combined cures and improvement totalled 93% of all cases. Itching, burning and other symptoms were largely controlled within 48 to 72 hours.

Formula: 0.2% gentian violet, 3% lactic acid, 1% acetic acid in a water-soluble polyethylene base.

samples and literature on request

Westwood Pharmaceuticals
DIVISION OF FOSTER-MILBURN CO.
468 Dewitt Street, Buffalo 13, N.Y.

1. Waters, E. G., and Wager, H. P.: Amer. J. Obstet. & Gyn. 60:885, 1950.

—Continued from page 62a

and the medication could be discontinued after three to six weeks. Correction of constipation resulted in clearing of chronic urticaria in two cases and of asthma in two cases. Cases of pseudomegacolon responded well.

In general, excellent results were obtained in most of the thirty-seven cases; methylcellulose could be discontinued after a reasonable period. The shortest time necessary for response was two days; longest was three weeks. All children gained weight under the therapeutic regime. No untoward side effects—allergic or other reactions—were noted.

Aminopterin Acts Similar to Cortisone

Aminopterin appears to produce results similar to those obtained with cortisone in some conditions. Seven of 8 cases of rheumatoid arthritis were improved following treatment with aminopterin, according to a report by Gubner, August, and Ginsburg in *Am. J. Med. Sci.* [*221:* 169 (1951)]. There was an increased range of motion in all patients showing improvement, a reduction in fever in those having this symptom, and a reduction in WBC in a few patients. The remission lasted for 6 weeks after aminopterin was withdrawn, in one patient. Striking remission of psoriatic lesions was also obtained in 6 patients with psoriatic arthritis and in 3 patients with complicated psoriasis of long standing.

Since aminopterin does not act in any way through the adrenal cortex the authors suggested the possibility that the adrenal hormones and aminopterin act in common in their ability to inhibit tissue replacement. Such action is particularly applicable to such diseases as arthritis and

—Continued on page 66a

So much depends on the right start

Many physicians find that Pet Milk for routine first feeding of infants is a valuable prophylactic measure in avoiding sensitization to milk.

Food allergens are likely to be troublesome early. This is especially true of babies who have inherited a tendency to develop allergies.

Pet Evaporated Milk helps to avoid this problem. Heat sterilization removes whey proteins from solution so that they are not immediately absorbed, undigested, into the blood stream. Instead, they are retained in the gastro-intestinal tract until digested and are then absorbed as harmless amino acids.

To help assure the right start, to help avoid feeding problems later on, use Pet Milk as the first food for infants in your care.

FAVORED FORM OF MILK FOR INFANT FORMULA

PET MILK COMPANY, 1483-J Arcade Building, St. Louis 1, Missouri

MODERN THERAPEUTICS

—Continued from page 64a

psoriasis, according to the authors, because these conditions are essentially inflammatory reactions involving connective tissue.

Dilaudid Suppositories for Cough Reflex

Donelson, writing in the *J. Michigan M. Soc.* [*50*:51-64 (Jan. 1951)], reports a case of a severe upper respiratory infection in a girl of 2 years in whom a constant nonproductive cough was the chief factor in increasing the swelling and edema of the throat and tonsils. The rectal temperature was 104°F., the pulse 144, and the respirations 40. Despite the administration of penicillin intramuscularly, the inflammation progressed rapidly. Oral administration was impossible, the child would not even take fluids. One-half of a Dilaudid suppository, that is 1/48 of a grain of Dilaudid, was therefore given rectally. " . . . within fifteen minutes not only had the cough subsided but also the child had ceased crying and had gone to sleep. Respirations were depressed to 15 per minute. After two hours the stridor had subsided considerably and instructions were left to continue the suppositories at the rate of one-half (Dilaudid 1/48 grain) if the cough recurred, providing the respirations were above 20 per minute. A second dose was required about seven hours after the initial dose.

"Examination after twenty-four hours revealed dramatic change. The inflammatory reaction in the throat had undergone a remarkable improvement, no edema and only slight hyperemia remained, although the rectal temperature was still 101°, pulse 132, respirations 22. The mother reported that the child had taken fluid twice during the night and

—Continued on page 68a

—Continued from page 66a

had eaten well during the day. It was believed that removal of the mechanical trauma of the cough was the predominant factor in this sudden improvement of the nasopharyngeal tissues.

"The above case responded so dramatically that Dilaudid suppositories were used in thirty-two consecutive clinical cases as the sole adjunct to penicillin in cases of upper respiratory infections, with nonproductive cough but negative chest findings. Dilaudid was also used to suppress pain in several cases of severe cervical adenitis and otitis media of undetermined etiologies. The age group of the above-mentioned cases ranged from six months to four years. There was no difficulty with the premature expulsion of the drug before absorption.

"The results seem to me to be so spectacular and the gratitude of the mothers of these children so great that this report is offered to the profession in its purely empirical form with the hope that scientific research and clinical trial will be accelerated, not only with Dilaudid but all medications that can be administered rectally in childhood diseases. . . . "

In his conclusions Dr. Donelson states, " . . . it is my impression that Dilaudid suppositories administered rectally are much more effective and less toxic than codeine administered orally, as far as suppression of the cough reflex and relief of pain are concerned. . . . "

Neomycin in Abdominal Surgery

Neomycin destroys the bacteria in the intestinal tract very rapidly following oral

—Continued on page 70a

NO LAXATIVE LAG

with Sal Hepatica

When your patients ask about fast laxation recommend effervescent Sal Hepatica. There's no lag, no continuing discomfort while your patients wait for *this* laxative to act. Taken before the evening meal, satisfactory action is assured before bedtime, thus permitting a sound night's sleep. Taken in the morning before breakfast, laxation will usually occur within the hour.

Sal Hepatica's action is gentle, too, for its fluid bulk provides *soft* pressure.

Sal Hepatica suits your patients' convenience—and yours. Antacid Sal Hepatica also combats gastric hyperacidity which so often accompanies constipation.

*Aperient

*Laxative

*Cathartic

*Average dose

SAL HEPATICA, a product of BRISTOL-MYERS
19 West 50th Street, New York 20, N. Y.

—Continued from page 68a

administration. It does not favor the development of resistant forms of bacteria but, *Aerobacter aerogenes* is not always inhibited by neomycin. Therefore, Poth *et al.*, writing in *South Med. J.* [*44*:179 (1951)] stated that phthalylsulfathiazole was given as a supplementary agent. The usual preoperative procedure involved a low residue diet, 30 to 60 cc. of castor oil, and then 1 Gm. of neomycin sulfate and 1.5 Gm. of phthalylsulfathiazole orally on a 4-hour schedule for 3 days. More recent observations would indicate that this time might be decreased substantially. In cases where an operation must be performed quickly the bowel can be evacuated and an enema of neomycin solution injected.

The authors stated that the combined neomycin - phthalylsulfathiazole treatment had been used in connection with various types of bowel resection with excellent success. They suggested that this combined treatment presents a close approach to the ideal for intestinal antisepsis.

Follow-up Study of Streptomycin-treated Tubercular Meningitis Patients

The 18 survivors out of the original 54 patients with tubercular meningitis, previously treated with streptomycin and reported, had been observed for the longer period of 2½ to 3½ years. Two patients had died and 3 had relapsed but had recovered with further treatment. Two patients developed tubercular lesions which were non-meningeal. They, too, responded with treatment. Calnan, Rubie, and Mohun reports in *Brit. Med. J.* [*No. 4710*: 794 (1951)] that 2 children among the survivors showed deafness, 1 child had a minimal hemiplegia, 1 showed retarded development, and 1 showed an intellectual defect. Marked loss of hearing was

evident in 2 other survivors and complete loss of vestibular response was evident in all of the patients during caloric tests but none showed clinical ataxia in good light.

Slight variations in cerebrospinal fluid findings caused the authors to conclude that although there was no other evidence of activity patients could not be considered to be cured even after 2½ years of observation. Further study and observation is necessary.

Tetanus Immunization

A long term study was made of the results of immunization against tetanus with tetanus toxoid on 300 children who were immunized between 1938 and 1940. During the intervening years 1,363 titrations of the blood serum for tetanus antitoxin were made on 262 of the children. Two or 3 injections were given for the initial immunization. It was found that 2 injections did not always give protective levels of antitoxin but detectable amounts of antitoxin were found in all immunized children tested up to 10 years after immunization. However, Bigler stated in *A.M.A. Am. J. Dis. Child.* [*31*:226 (1951)], that the results of the study indicated that a booster injection should always be given after an injury from which tetanus might develop. It was found that protective levels of antitoxin developed rapidly after booster injections up to 10 years after immunization.

Eurax as an Antipruritic and Scabicide

Dr. Albert Soifer, writing in the March 1951 *Quarterly Review of Internal Medicine and Dermatology*, presents a clinical evaluation of 10 per cent N-ethyl-o-crotonotoluide in a vanishing cream base, known as Eurax. While under investigation abroad for its scabicidal powers, this substance was found to be an effective antipruritic as well as a scabicide. In this

—Continued on following page

—Continued from preceding page

series 159 patients with pruritic lesions or pruritus without visible lesions were treated routinely with Eurax. Of these, 117 were observed sufficiently to be reported. These patients represent a wide variety of dermatologic entities, of which the most common were eczematous dermatitis, genital pruritus, and neurodermatitis.

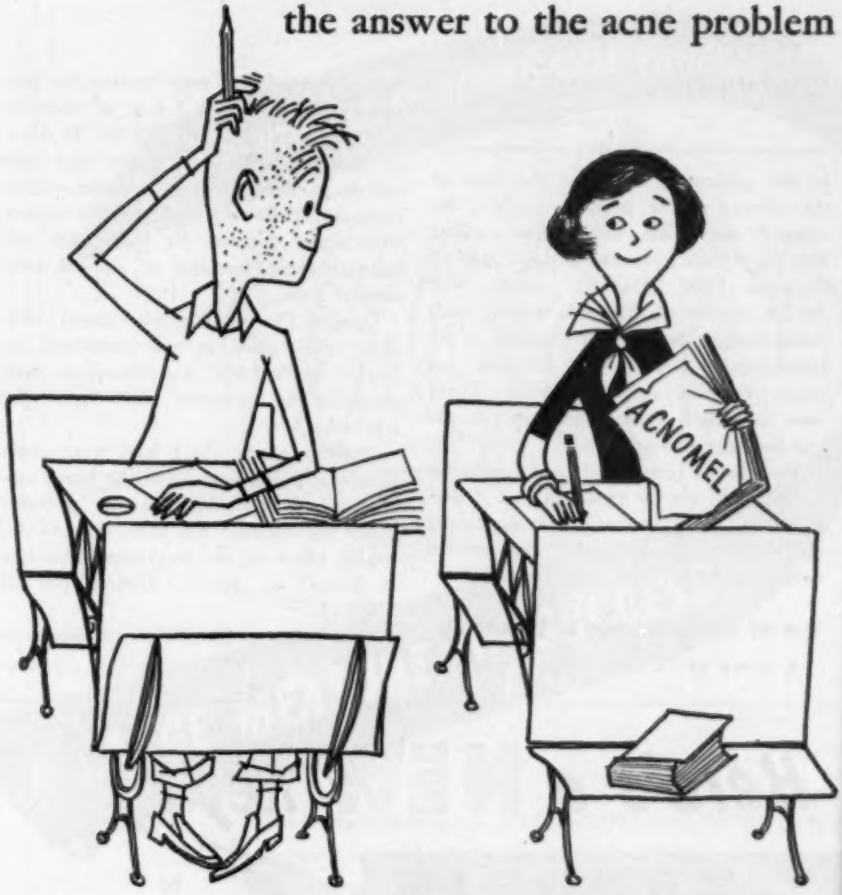
Prompt and complete relief of pruritus was obtained in 83.7 per cent of the 117 cases, and moderate relief in another 10.4 per cent. Eight patients had to discontinue use of the cream because of local irritation. No instance of sensitization was observed. The cream was usually effective for 4 to 8 hours and continued to be effective as long as it was used. It was found that the preparation was not tolerated in acute or weeping conditions until after the acute phase had subsided. The only toxic effects consisted of a transient, immediate sense of warmth on application of the cream and one instance of increased sweating.

Role of Sulfonamides and Antibiotics in Perforated Peptic Ulcers

The article by Reynolds, Cantor and Stebbins in *Rev. Gastroenterol.* [*18*:207 (Mar. 1951)] contained a review of the chemotherapeutic measures which they had followed over the past few years in conjunction with the simple closure of perforated peptic ulcers. Sixteen of 41 patients, who had sulfanilamide placed

—Continued on page 74a

the answer to the acne problem



Physicians write "Acnomel" because they know that it fills all the requirements for the successful topical treatment of acne:

1. Acnomel is rapidly effective;
2. Acnomel masks the lesions;
3. Acnomel closely matches skin color.

Acnomel is so eminently satisfactory that it is prescribed more often than all other ethical acne preparations combined.

Formula: Resorcinol, 2%; sulfur, 8%; in a stable, grease-free, flesh-tinted vehicle. Available in specially-lined 1½ oz. tubes.

Smith, Kline & French Laboratories, Philadelphia

'Acnomel' T.M. Reg. U.S. Pat. Off.

Acnomel

a significant advance, clinical and cosmetic, in acne therapy

—Continued from page 72a

in the peritoneal cavity at the time of the closure of the perforated ulcer, developed peritonitis or delayed wound healing, with an average hospital stay of 13 days. Only 19 of 83 patients, with similar conditions but not treated with sulfanilamide, developed peritonitis or delayed wound healing. Of 48 later patients, 41 were given penicillin. There were no deaths among these 48 patients and recovery was uneventful.

The author concluded that sulfanilamide should not be used and that if perforations of the stomach or duodenum are closed surgically within the first ten hours, no antibiotic is required.

Use of Sulfanilamide in Trachoma

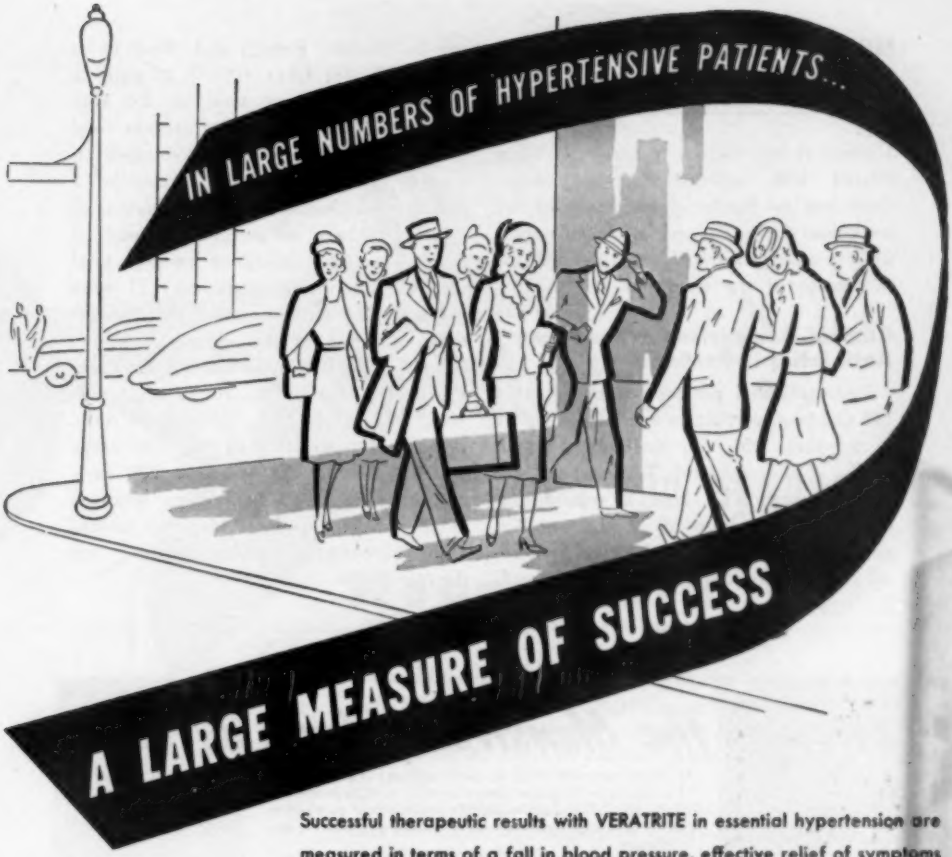
A group of 11 boys 7 to 12 years of age with trachoma were treated for secondary infection with 1 Gm. of sulfadiazine orally per Kg. per day for 10 days, or with applications of 6 per cent zinc sulfate paint and 0.5 per cent zinc sulfate ointment. Following treatment the smears were either negative for pathogenic and nonpathogenic bacteria or showed only normal flora.

Lutazol [5-(*p*-sulfamylphenylazo) salicylic acid], given by subconjunctival injection or by oral administration, then produced no apparent effect upon the trachoma.

Another group of 11 boys were given powdered sulfanilamide in the lower culde-sac and 0.25 Gm. per Lb. per day orally for 10 days but there was no apparent effect on the trachoma, according to Kamel in *Am. J. Ophth.* [*34*:205 (1951)].

In a group of 25 children 3 months to

--Concluded on page 76a



Successful therapeutic results with **VERATRITE** in essential hypertension are measured in terms of a fall in blood pressure, effective relief of symptoms and rehabilitation of the patient to a useful, productive life.

The most significant effects of **VERATRITE** are circulatory improvement and a new sense of well-being for the patient. Furthermore, Veratrite exhibits a wide range of therapeutic safety and a prolonged length of action without serious side-effects, due to its content of *whole-powdered* veratrum viride, Biologically Standardized.

Supplied: Bottles of 100, 500, 1000 at prescription pharmacies everywhere.

ECONOMY IS AN IMPORTANT ADVANTAGE OF VERATRITE THERAPY

Each VERATRITE Tabule contains:
Veratrum Viride . . . . . 3 Craw Units*
Sodium Nitrite . . . . . 1 grain
Phenobarbital . . . . . ¼ grain
Beginning Dose: 2 tabules t.i.d., after meals.

***Biologically Standardized for toxicity by the Craw Daphnia Magna Assay.**

Veratrite®

IRWIN, NEISLER & COMPANY **DECATUR, ILLINOIS**

—Concluded from page 74a

3 years of age with very early trachoma treated with sulfanilamide as above, there was no further development of the trachoma during 1 year after treatment while a control group showed definite advancement of the condition.

Clinical Comparison of the Newer Antibiotics in Pertussis

Uncomplicated pertussis was treated in 148 children, varying in age from 3 weeks to 9 years, with the antibiotics, aureomycin, Chloromycetin, Terramycin, and streptomycin. The first 3 were given orally in daily doses of 50 Mg. per Kg. and the latter intramuscularly or by aerosol in daily doses of 1 to 2 Gm. According to Booher, Farrell and West in *J. Pediat.* [*38*:411 (Apr. 1951)], 22 patients received an average total of 4.6 Gm. aureomycin, 34 received an average total of 5.5 Gm. Chloromycetin, 38 received an average total of 6 Gm. Terramycin, 5 received simultaneously a combination of 2 of the above in an average total of 10.24 Gm., 28 received an average total of 7.46 Gm. streptomycin, and 21 were controls. The authors stated that the average duration of the whoop stage was 5.7, 5.5, 4.6, 6.4, 10.6, and 13 days, respectively; that of the cough stage was 18.1, 14.7, 15.4, 18.4, 19, and 18 days, respectively; and that of the fever stage was 3.8, 0.9, 0.9, 0.8, 4.4, and 2.08 days, respectively. Treatment failures occurred in 12 additional patients who were treated with aureomycin, Chloromycetin, and Terramycin or combinations.

for Control

in Sedation and Hypnosis...

Neuronidia®

(Elixir of diethylmalonylurea — Schieffelin)

Neuronidia is an effective sedative and hypnotic. It may be safely used in insomnia, hysteria, neurasthenia, thyroid diseases, chorea and mental disturbances. ***Neuronidia*** is indicated in virtually all cases of nervous disturbances uncomplicated by pain.

Pharmacological and clinical research have demonstrated that the depth and degree of sedation and hypnosis can be readily controlled with barbital, the active ingredient of

NEURONIDIA

Neuronidia contains per teaspoonful:
0.13 Gm. diethylmalonylurea

Dosage: Orally, as a sedative
½ to 1 teaspoonful repeated as indicated
As a hypnotic
2 teaspoonfuls before retiring

℞ Sodium salicylate ʒIV
Neuronidia ʒIV

Sig: *To induce sleep and produce analgesia*
one dessertspoonful at bedtime.
For sedation and analgesia
One teaspoonful two or three times daily as required.

Supplied: Bottles of 8 fluid ounces, and 1 gallon

Professional samples and literature are available on request.

Schieffelin & Co. since 1794

pharmaceutical and research laboratories
24 Cooper Square, New York 3, N. Y.

NEWS AND NOTES

Aureomycin Packing and Dressing Now Available

Aureomycin Packings and Aureomycin Dressings are now being marketed by Davis & Geck, one of the nation's largest manufacturers of surgical sutures, through its surgical supply dealers.

Aureomycin Packing provides a stable form of aureomycin impregnated into a special type of surgical gauze, which releases aureomycin at the site of application. In conjunction with other indicated treatment, it is used for packing infected wounds and other lesions such as in abscesses, carbuncles, pilonidal sinuses, infected gangrene, paronychia, suppurative adenitis, empyema, draining abdominal wounds, traumatic wounds that have been left open, etc., where drainage is to be provided and closure prevented until infection clears.

Extensive animal and clinical experience has shown that wounds heal cleaner and faster following the use of Aureomycin Packing, through control of susceptible micro-organisms which retard wound healing and that they may lead to invasive infection. Extensive experience in a large variety of human cases has shown no complications of healing . . . no allergic reactions. The infected lesions resolved promptly . . . discharges rapidly diminished and granulations promptly appeared.

The other new product, Aureomycin dressing of an entirely new type designed to minimize adherence of the dressing to Dressing, is a non-adherent antibiotic the wound, with consequent avoidance of disruption upon removal. Since the dressing is absorbent, it does not result in the maceration often observed with a "water-

—Continued on page 82a

'Round the Clock

B-P RIB-BACKS make it *Easy*

Easy ON THE SURGEON because he is assured dependable blade performance by uniform sharpness—greater strength and rigidity.

Easy ON THE ASSISTANTS because dependable blade performance reduces time consuming delays detrimental to clocklike surgical procedure for the entire surgical team.

Easy ON THE BUDGET because the purchaser of B-P RIB-BACKS is assured proved cutting performance from every blade—and the maximum of satisfactory service . . . thus reducing blade consumption to an economic minimum.

It's Sharp

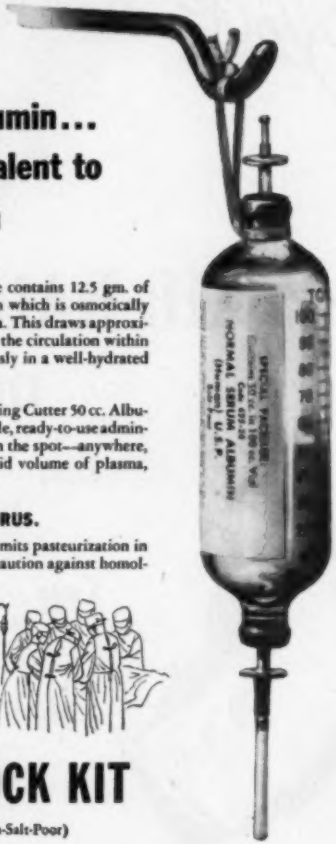
Ask your dealer

BARD-PARKER COMPANY, INC.

Danbury, Connecticut

NEW shock therapy kit

Cutter 50 cc. Albumin... Osmotically Equivalent to 250 cc. of Plasma



RAPID RESPONSE. Each double-ended bottle contains 12.5 gm. of albumin in 50 cc. of buffered solution which is osmotically equivalent to 250 cc. of citrated plasma. This draws approximately 175 cc. of additional fluid into the circulation within *15 minutes*, when injected intravenously in a well-hydrated patient.

FAST ADMINISTRATION. The new space-saving Cutter 50 cc. Albumin Shock Therapy Kit features a sterile, ready-to-use administration set . . . immediately sets-up on the spot—anywhere, any time. With only one fifth the fluid volume of plasma, administration time can be reduced.

HEAT TREATED AGAINST HEPATITIS VIRUS.

Human Serum Albumin's stability permits pasteurization in the vial for 10 hours at 60° C. as a precaution against homologous serum jaundice virus.

Albumin In Other Conditions

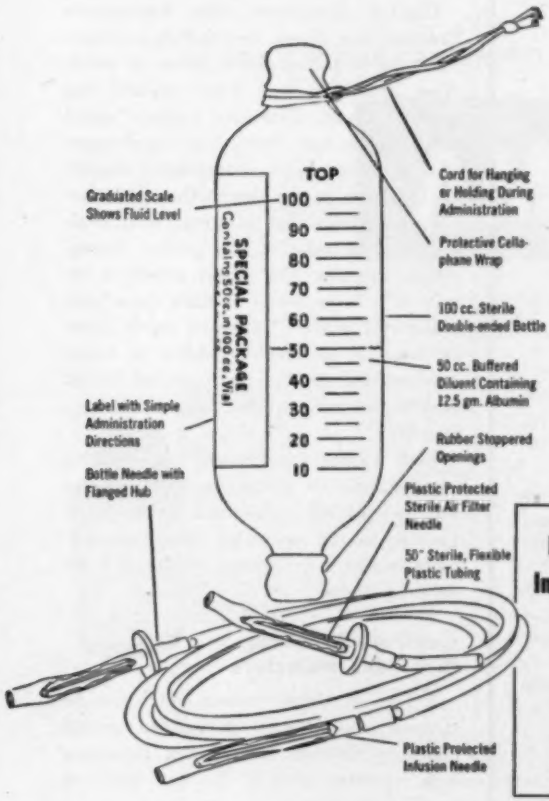
Write for a booklet describing the use of Albumin in hypoproteinemia, renal diseases, cirrhosis. Cutter Laboratories, Berkeley, California.

Use **CUTTER**

ALBUMIN SHOCK KIT

(Normal Human Serum Albumin-Salt-Poor)

ready for instant use



For Rapid Action In Shock Therapy...

Use

CUTTER ALBUMIN SHOCK KIT

CUTTER LABORATORIES • BERKELEY, CALIFORNIA

NEWS AND NOTES

—Continued from page 78a

proof" dressing that entraps moisture providing an environment conducive to bacterial growth.

Aureomycin Dressing, in conjunction with other appropriate measures, is indicated for use on burns, skin-graft donor sites, ulcers, surgical incisions, etc. It is expected that the new dressing will be particularly useful in the management of infected surfaces which present a special problem from the standpoint of control of infection and early closure.

Clinical experience with Aureomycin Dressing has shown no contraindications. The take of skin-grafts on areas to which these dressings have been applied has been excellent. Extensive bacteriological investigation has shown that application of these dressings to contaminated wounds has resulted in the destruction of hemolytic pathogens that interfere with healing and the take of skin-grafts. Aureomycin Dressing has shown excellent results in a large series of burn cases both major and minor. This is of timely interest because so much attention is being concentrated on the treatment of burns, both in the Armed Forces and in Civilian Defense.

Both Aureomycin Packing and Dressing are available to physicians and surgeons for general office use and to hospitals for use in the operating room, accident room, surgical out-patient clinics and the surgical ward.

Controlled Cancer in Golden Hamsters

A type of kidney cancer which can be stopped and started at will in golden hamsters through use of sex hormones was reported recently by two Stanford medical scientists.

In papers delivered at the University

—Continued on page 84a

"The obese person's weight can be reduced by . . . curtailing the intake of food . . . judiciously and with regard to physiologic laws. Therefore in restricting the food, precautions should be taken to guard against . . . mineral-vitamin deficiency . . . the distress of great hunger and profound weakness."[1]

1. McLester, J. S.: Nutrition and Diet in Health and Disease, pp. 412-413, 1949.

AM PLUS provides balanced proportions of 8 vitamins and 11 minerals and trace elements to effectively safeguard the obese patient against hazardous nutritional deficiencies which often result from the restricted dietary regimen.

for sound obesity management specify

AM PLUS

EACH CAPSULE CONTAINS

DEXTRO-AMPHETAMINE SULFATE	5 mg.
Calcium	242 mg.
Cobalt	0.1 mg.
Copper	1 mg.
Iodine	0.15 mg.
Iron	3.33 mg.
Manganese	0.33 mg.
Molybdenum	0.2 mg.
Magnesium	2 mg.
Phosphorus	187 mg.
Potassium	1.7 mg.
Zinc	0.4 mg.
Vitamin A *(Synthetic)*	5000 U.S.P. Units
Vitamin D *(Irradiated Ergosterol)*	400 U.S.P. Units
Thiamine Hydrochloride	2 mg.
Riboflavin	2 mg.
Pyridoxine Hydrochloride	0.5 mg.
Niacinamide	20 mg.
Ascorbic Acid	37.5 mg.
Calcium Pantothenate	3 mg.

Available on all prescription pharmacies, supplied in bottles of 100 capsules

ROERIG

J. B. ROERIG AND COMPANY, 536 LAKE SHORE DRIVE, CHICAGO 11, ILL.

—Continued from page 82a

of Southern California before the 32nd annual meeting of the Pacific Division of the American Association for the Advancement of Science, Drs. Hadley Kirkman and Robert L. Bacon reported:

1. They had started kidney tumors in hamsters by administering the synthetic female hormone, stilbestrol.

2. They had stopped growth of the tumors by giving the hamsters the male hormone, testosterone, concurrently with the female hormone.

3. And they had stopped the tumors also by giving another female hormone, progesterone.

They cautioned against any interpretation that the research, supported by the American Cancer Society and the National Cancer Institute, had any clinical significance in terms of human kidney cancer.

One reason for this warning is that other experimental animals do not respond similarly. The other is that a portion of the pituitary gland — a pituitary lobe poorly developed in humans — seems to be involved in the kidney tumor production in hamsters. Where tumors appeared in hamster kidneys, they appeared also in this pituitary lobe.

Early Surgery Urged As Aid In Recovery from Poliomyelitis

Early surgery frequently will speed the recovery of poliomyelitis victims, according to Dr. Charles L. Lowman, director of education and rehabilitation and emeritus chief of staff at the Orthopaedic Hospital, Los Angeles.

"Parents naturally wish to avoid surgery, and sometimes it is possible to con-

—Continued on page 86a

PSORIASIS
deep lesions
RIASOL
deep action

The basic lesions of psoriasis take origin in the deeper layers of the epidermis. That is why the deep action of RIASOL is required to produce effective therapeutic results.

There is no other prescription exactly the same as RIASOL. Both the active ingredients and the vehicle are unique. The mercurial content is chemically combined with soaps, in which form it is carried to the deeper layers of the epidermis.

Deep action explains why the skin lesions of psoriasis gradually vanish, in the majority of cases, when treated with RIASOL. A clinical investigation has shown disappearance or improvement of the skin patches in 76% of the cases treated.

RIASOL contains 0.45% mercury chemically combined with soaps, 0.5% phenol and 0.75% cresol in a washable, non-staining, odorless vehicle.

Apply daily after a mild soap bath and thorough drying. A thin, invisible, economical film suffices. No bandages required. After one week, adjust to patient's progress.

Ethically promoted RIASOL is supplied in 4 and 8 fld. oz. bottles, at pharmacies or direct.

Before Use of Riasol

After Use of Riasol

MAIL COUPON TODAY — TEST RIASOL YOURSELF

SHIELD LABORATORIES
12850 Mansfield Ave., Detroit 27, Mich.

Please send me professional literature and generous clinical package of RIASOL

..... M.D. ..... Street

City ..... Zone ..... State .....

Druggist ..... Address .....

MT. 10-51

RIASOL for PSORIASIS

NEWS AND NOTES

—Continued from page 84a

tinue muscle training for a considerable period with a chance of recovery," Dr. Lowman said in a recent issue of the *Journal of the American Medical Association.*

"But, when early surgery is clearly indicated, it in no way jeopardizes outcome. In fact, it frequently wards off deformity and improves the ultimate result."

Patients often are continued on physical therapy one to two years before surgical reconstruction is attempted or recommended, he said. When the signs are clear, repair at any time from the third to fourth month is none too early, he added.

"Such intervention will save the time spent in hospital or convalescent home and the time of all persons involved in the care of the patient," he said. "Cost of hospitalization and physical therapy will be sharply reduced."

Some operations, especially those involving invasion of growing bone, may have to be deferred but certain soft tissue surgery, such as to improve function of the thumb, can safely be done early, he said. Early operation also should be resorted to if indications are clear that deformity is impending, he pointed out.

Dr. Lowman stressed that patients and their families should be given an understanding of the aims and sequence of treatment and the need for the establishment of a streamlined tentative over-all care program. He added:

"If parents have been made to realize that a careful plan of total care has been set up which will save time, work and funds for all concerned, they will accept more willingly desirable changes from one modality of treatment to another and be ready to cooperate when the recommendation for surgery is made."

He suggested that as a matter of econ-

—Continued on page 88a

A "Complete" Medical Refresher At Your Fingertips In 1 Pocket-Size Edition

FREE 7 DAY TRIAL

HOSPITAL STAFF AND OFFICE MANUAL

by T. M. Larkowski,* Professor of Clinical Surgery, Stritch School of Medicine, Loyola University, Chicago, Ill., and A. R. Rosanova, Clinical Instructor, University of Illinois Medical School, Chicago, Ill.

*Deceased

- **Fabrikoid, semi-flexible cover, resistant to water, acid, mildew.**
- **Fine coated paper.**
- **Size 4½" x 7".**

This essential manual, with its 22 chapters, 428 pages and 150 illustrations contains the result-producing procedures of the authors and their sixteen capable associates. Here are the time-tested, trustworthy basic principles of the clinical practice of medicine and surgery in all its branches.

The text is concise as possible without sacrificing any of its clarity. A quick reference to this single volume places at the time-crowded doctor's finger-tips, the oft-used essential diagnoses, practical therapeutics, diagnostic aids, laboratory procedures, surgical technics plus a complete refresher on all common surgical operations.

The text of this manual is a novel departure in that it is short at times to the point of abruptness. This factor, however, is inherent in the design of the manual as the authors have purposely omitted the highly theoretical and concentrated instead on compacting all the essential and practical information possible into this one handy manual.

Contents of this Concise HOSPITAL STAFF AND OFFICE MANUAL

Routine Hospital Technics
Laboratory Procedures
Electrocardiography
X-Rays
X-Ray Technic
Anesthesia
Materia Medica
Sulfonamide & Antibiotic Therapy
Medicolegal Aspects of Practice
Physical Medicine
Medicine
Surgery
Urology
Gynecology
Obstetrics
Pediatrics
Orthopedics
Dermatology
Ophthalmology
Otolaryngology
Neurology
Psychiatry

SEND NO MONEY — Mail Coupon Now For FREE 7 Day Examination

Just fill in coupon and mail. Pay postman nothing. Read HOSPITAL STAFF AND OFFICE MANUAL for 7 days. If convinced of the value of this book send only $4.95; otherwise return book and owe nothing.

Romaine Pierson Publishers, Inc.
676 Northern Boulevard
Great Neck, Long Island, N. Y.

From the Reviews

"HOSPITAL STAFF AND OFFICE MANUAL is authoritative and usable. It should find a welcome in any hospital's library or doctor's reference shelf." HOSPITAL MANAGEMENT

"By far the best arranged and most readily usable of any of the pocket manuals." OHIO STATE MEDICAL JOURNAL

"Presents the time-tested, the trustworthy, the basic principles of the clinical practice of medicine and surgery in all its branches." FLORIDA MEDICAL JOURNAL

"The purpose of the book is to bridge the theoretical teachings in medical school and the actual practice of medicine in the hospital and office. The publishers have succeeded in this." NEW YORK PHYSICIAN

"It is a good source of quick reminders on most of the problems with which a physician may find himself faced. The conception and execution . . . reflect great credit upon the organizing ability of the authors." MEDICAL TIMES

Romaine Pierson Publishers, Inc.
676 Northern Boulevard
Great Neck, Long Island, N. Y.

Please send me the new Hospital Staff and Office Manual. I will pay postman nothing. If I am not completely satisfied with value of this book, I may return it within 7 days and owe nothing. Otherwise I will send $4.95 plus postage (check or money order).

Name .....

Address .....

City .....Zone .....State .....

SAVE: Send payment now (check or money order). WE then pay postage. Money back guarantee if not completely satisfied.

—Continued from page 86a

omy, parents, public health personnel and volunteer workers take over some home physical therapy treatment of poliomyelitis patients. If weekly or biweekly treatment is given by a physical therapist at a clinic, mildly affected patients usually do well under supervised home care, he said.

Dr. Lowman said that while little can be done to shorten the time of the acute fever phase of the disease, economy can be effectd by the release of patients from isolation care at the end of a week or when fever ceases. This is now generally felt to be safe, he said.

"This would permit earlier discharge for out-patient follow-up of the almost 50 per cent of patients who recover without significant weakness or paralysis and permit great reductions in expenditures for hospital care," he pointed out. "Of course, early institution of good care during the isolation period will also do much to hasten recovery."

Thewlis Clinic

Thewlis Clinic, Wakefield, R. I., is a small clinic, established in 1940 for the care of ambulatory patients. It is directed by Malford W. Thewlis, M.D., and staffed by two internists, E. T. Gale, M.D., and Chester Solez, M.D.; a surgeon, Richard J. Kraemer, M.D.; also a dentist, Maurice J. Fagan, D.D.S.

These physicians have private offices nearby and are in and out of the clinic. Patients are directed to them for visits at home. The clinic acts as a center for distributing medical services.

There is some one on duty at all times. More severe illnesses are cared for at the South County Hospital.

Primarily the purpose of the clinic is preventive and clinical geriatrics. Preclinical medicine, or preventive geriatrics, begins at 20; geriatrics itself begins at 40. An attempt is made to detect disease tendencies and to correct them early during conditioning periods.

Periodic medical examinations, together with necessary laboratory studies, are done on each patient. Records are compared as future studies are made. Treatment includes studies of nutrition and psychosomatic medicine.

The clinic is equipped with modern apparatus for diagnosis; x-ray, electrocardiograph, phonocardiograph, gastric camera, and a complete clinical laboratory. This is directed by Zylpha N. Allen, registered x-ray and medical technologist. Alice-Ann Rose and Ruth Fagan are assistant technicians. Service is available at all times. A portable x-ray machine and laboratory equipment are transported for home diagnosis. Therapy with high voltage x-rays and radium, also physiotherapy, are obtainable.

Rooms are at the disposal of patients who remain overnight for complete x-ray studies or basal metabolism estimations. Rooms are used for radium therapy; also for any special treatment which does not require hospitalization.

The clinic came about through 40 years' service in the community, giving an intimate knowledge of families, permitting

a continuous study. It is a diagnostic clinic dedicated to the prevention of future illnesses.

Life Stresses Cited as Chronic Colitis Factor

Chronic ulcerative colitis, which is marked by severe and frequent diarrhea, when not traceable to a specific organism may be due to daily life stresses. In that event, the condition frequently can be cleared by doctor-patient understanding without resort to medication.

This was the experience reported by Drs. William J. Grace and Harold G. Wolff of the New York Hospital and Cornell University Medical College, New York, in a recent issue of the *Journal of the American Medical Association.*

Many theories have been advanced for the cause of the disease—including bacteria, viruses, enzymes, food allergies and vitamin deficiencies. Long-term management of patients is difficult.

The New York doctors reported on the treatment of 19 cases in which the cause could not be determined by thorough diagnostic procedures. They found that in each patient the onset of the disease and every increase in severity of symptoms coincided with periods of stressful life circumstances.

Consequently, they viewed the ulcerative colitis in these cases as a stress disorder. Treatment was carried out on that theory, with the result that 11 patients were considerably improved, two slightly improved and six were unimproved. The procedure, they said, was found to be effective in approximately the same proportion reported by others using ostensibly different methods.

The treatment was carried out in interviews spaced at intervals of a few days or weeks, depending upon the needs of the subject. In the interview, the physician's role was that of a detached but interested, reliable, consistent and sup-

—Concluded on following page

porting confidant, the New York doctors said.

"The greatest benefit to the patient was a constructive physician-patient relationship," they added. "The patient was given opportunity and was encouraged to express with a free show of feelings, to a sympathetic and appreciative physician, the major complaints and difficulties in his life situation.

"Patients were given an explanation of the disease process, and this was repeated at suitable intervals, such as during periods of severe symptoms.

"The background, the family, the cultural setting, the emotional responses, and the aims and ambitions of the patient were explored in order to understand the patient and help him to understand himself.

"The patients were instructed in means of recognizing their own manifestations of accumulating emotional tension, and encouraged to accept them for what they represented and to attempt to deal with the circumstances leading to their presence.

"Finally, rearrangement in the environment was attempted. When successful, it produced dramatic results in terms of symptomatic relief. Unfortunately, however, this was not always feasible, often because of the lack of a practical maneuver, lack of cooperation of the family or because of the inability of the patient to accept any drastic change.

"No medication was given to the patient. The management was worked out *with* the patient. The patient's ability to utilize his own resources determined the final result. The physician guided him, helped him understand why he was getting into difficulty and supported him when he was trying to alter his environment or attitudes."

CLASSIFIED ADVERTISEMENTS

Advertisements under the headings listed are published without charge for those physicians whose names appear on the MEDICAL TIMES mailing list of selected general practitioners. To all others the rate is $3.50 per insertion for 30 words or less; additional words 10c each.

WANTED	FOR SALE
Assistants	Books
Physicians	Equipment
Locations	Practices
Equipment	FOR RENT
Books	MISCELLANEOUS

CLASSIFIED ADVERTISING FORMS CLOSE 15th of PRECEDING MONTH. If Box Number is desired all inquiries will be forwarded promptly. Classified Dept., MEDICAL TIMES, 676 Northern Boulevard, Great Neck, L. I., N. Y.

WANTED (Physicians, Assistants, etc.)

LABORATORY technician and receptionist wanted. New Rochelle, New York. Box 10A100, Medical Times.

GENERAL PRACTITIONER, preferably veteran or young displaced physician who is draft exempt, wanted to work with group. New Rochelle, N. Y. Box 10A103, Medical Times.

MEDICAL ASSOCIATE wanted. Practice confined to internal medicine. New Jersey. Box 10A101, Medical Times.

INTERNIST or Pediatrician wanted as busy General Surgeon's Associate. Oklahoma. Box 10A102, Medical Times.

TWO NURSES wanted—general duty—18 bed hospital (Dr. Porter's Hospital, Glenwood Springs, Colorado).

GENERAL PRACTICE assistant wanted. Contact B. E. Nutting, M.D., Glenwood Springs, Colorado.

LAB. TECHNICIAN for doctor's office wanted. Routine lab. work and assist doctor. California. Box 10A104, Medical Times.

REGISTERED NURSE wanted for doctor's office. California. Box 10A111, Medical Times.

GENERAL PRACTITIONER wanted. Share the expenses of an office in Suburban SW Portland, Oregon. Box 10A105, Medical Times.

EAR, NOSE AND THROAT man, who has some knowledge of eye work and refraction, wanted. Oklahoma. Box 10A106, Medical Times.

LABORATORY technician wanted. Routine lab. work, no typing nor bookkeeping. Sapulpa, Okla. Box 10A107, Medical Times.

REGISTERED LAB. and x-ray technician wanted. Must be good. Forty-four hour week, plus split call duty. Salary (no maintenance)—$300 per month; with other qualifications—up to $400 per month. Write, Langdon Clinic and Hospital, 2236 Bessemer Road, 5 Points West, Birmingham, Ala.

LAB. TECHNICIAN for medical doctor wanted. Permanent. Nebraska. Salary open. Box 10A109, Medical Times.

OFFICE NURSE, who is capable of doing stenography, wanted. Idaho. Box 10A110, Medical Times.

MEDICAL ASSISTANT wanted. Neat appearing, pleasing personality. Knowledge of BMR, EKG. Salary open, 4½ day week. Flushing, New York. Send qualifications for interview to: Box 10A108, Medical Times.

MEDICAL TECHNICIAN and MEDICAL SECRETARY wanted. Two truly responsible positions with good salaries for two smart, quick, cooperative girls. References required at time of personal interview. North Carolina. Write Box 9A99, Medical Times.

PHYSICIAN with large, well established general practice in Cincinnati, Ohio desires physician as assistant. Practice offers excellent experience in obstetrics and general medicine. Courtesy staff privileges assured at AMA approved hospitals. Starting salary based on experience. Box 9A98, Medical Times.

YOUNG G. P. wanted for group practice. City of 35,000. Ohio. Salary. Opportunity to join group. Box 7A88, Medical Times.

WANTED (Equipment, Homes, etc.)

BINOCULAR microscope wanted. Reply stating price, age, make, condition, etc. Box 7B16, Medical Times.

ULTRA-VIOLET machine wanted. State model, type, price. Box 10B17, Medical Times.

RITTER motor driven table for proctol. and surgical work, wanted. Box 10B18, Medical Times.

WANTED (Locations, Positions, etc.)

GENERAL PRACTITIONER of 16 years experience desires training in Physical Medicine, preferably as assistant. Family responsibilities, duties require adequate financial return, in exchange for unlimited energy and loyalty. Box 10C19, Medical Times.

FOR SALE (Homes, Sanitaria, etc.)

CLINIC HOSPITAL for sale. Twenty-five beds, 6 bassinettes, 11 room clinic. Air conditioned. Central Texas. Gross $170,000 annually. Two to three doctors can handle. Box 10E22, Medical Times.

BEAUTIFUL 20 BED HOSPITAL for sale. Completely equipped, in thriving Florida east coast town, near army base. $20,000 will handle. Box 10E21, Medical Times.

HOUSE, OFFICE fully equipped for sale or lease. Practice provides $30,000 annual income. Arizona. Box 10E20, Medical Times.

FOR SALE (Practices)

MIDWEST. Established ten years, unopposed general practice with good amount of surgery, in County Seat town, fifteen minutes drive from center of 250,000 population city, with all hospital facilities. Gross $30,000. Home, ranch style, and downtown office, new, with or without equipment. Write Box 10F36, Medical Times.

LARGE general practice for sale for price of 6 room modern office and 4 bedroom, 2½ bath house. Very reasonable. Fast growing community near hospital. California. Box 9F35, Medical Times.

FOR SALE (Equipment)

STEELUX SHAMPANE. New examining table for sale. Make offer. Box 10G84, Medical Times.

KELEKET (100 MA) x-ray, 1 year old, fluoroscopic and double cathode. Cost $4200. Will sell for $3500. Box 10G85, Medical Times.

SANBORN Instomatic EKG machine for sale. Excellent condition. Call Freeport (New York) 8-2967 or write Box 10G86, Medical Times.

BAUSCH & LOMB monocular microscope for sale. Also 60" walnut desk, glass top with green plastic covered arm chair and swivel chair. Box 10G87, Medical Times.

CYSTOURETHROSCOPES (3) for sale. Two McCarthy scopes, 18 and 24 size. One Brown Buerger #24. All good as new. $75.00 each. Box 10G88, Medical Times.

EDIPHONE dictator—electric, Ediphone secretary, for sale. Box 10G89, Medical Times.

FOR SALE (Miscellaneous)

HYMAN—"Integrated Practice of Medicine," 5 vol.—$50.00. Tice—"Practice of Medicine"—$75.00. Devis—"Obstetrics and Gynecology"—$35.00. Box 10H8, Medical Times.

FOR SALE—"Principles and Practice of Physical Therapy," 3 Volume—loose leaf, W. F. Prior Co., Inc. "Practice of Medicine," 10 volume, loose leaf, W. F. Prior Co., Inc. "Practice of Surgery," 12 volume and index, loose leaf, W. F. Prior & Co., Inc. Box 10H7, Medical Times.

FOR RENT

CORNER, first floor office for rent. X-ray, dark room and lab. Immediate possession. Used by D.D.S. 7 years. Pennsylvania. Box 10R36, Medical Times.

COMPLETE office space and equipment for rent. For General Practitioner, in 130,000 pop. city in middle west. For particulars, write Box 10R37, Medical Times.

OFFICE SPACE for specialist in Professional Bldg., Bellmore, L. I., N. Y. Reasonable rent. Box 10R38, Medical Times.

THREE ROOM OFFICE for rent. Available Tuesday, Thursday and Saturday. Completely equipped. May also be used for living quarters for single person. Write to: Dr. Morris A. Brand, 333 West 56th Street, New York 19, N. Y.

FOR SUBLEASE—Consultation room and small examining room. Use of common waiting room. Suitable Psychiatrist or other specialist. Phone REgent 4-3995. East 70's, off Park Ave., N.Y.C. Box 10R39, Medical Times.

MEDICAL OFFICES available in air-conditioned bldg. Partitioned, decorated. Top Beverly Hills, Cal., location. Ample parking. Moderate rates. Box 10R40, Medical Times.

PROSPEROUS LONG ISLAND NORTH SHORE COMMUNITY. Fully equipped physician's office for rent. Treatment room and waiting room of deceased practitioner with large practice. Fluoroscope and complete medical and minor surgical equipment. Long term lease if desired. Box 4R30, Medical Times.

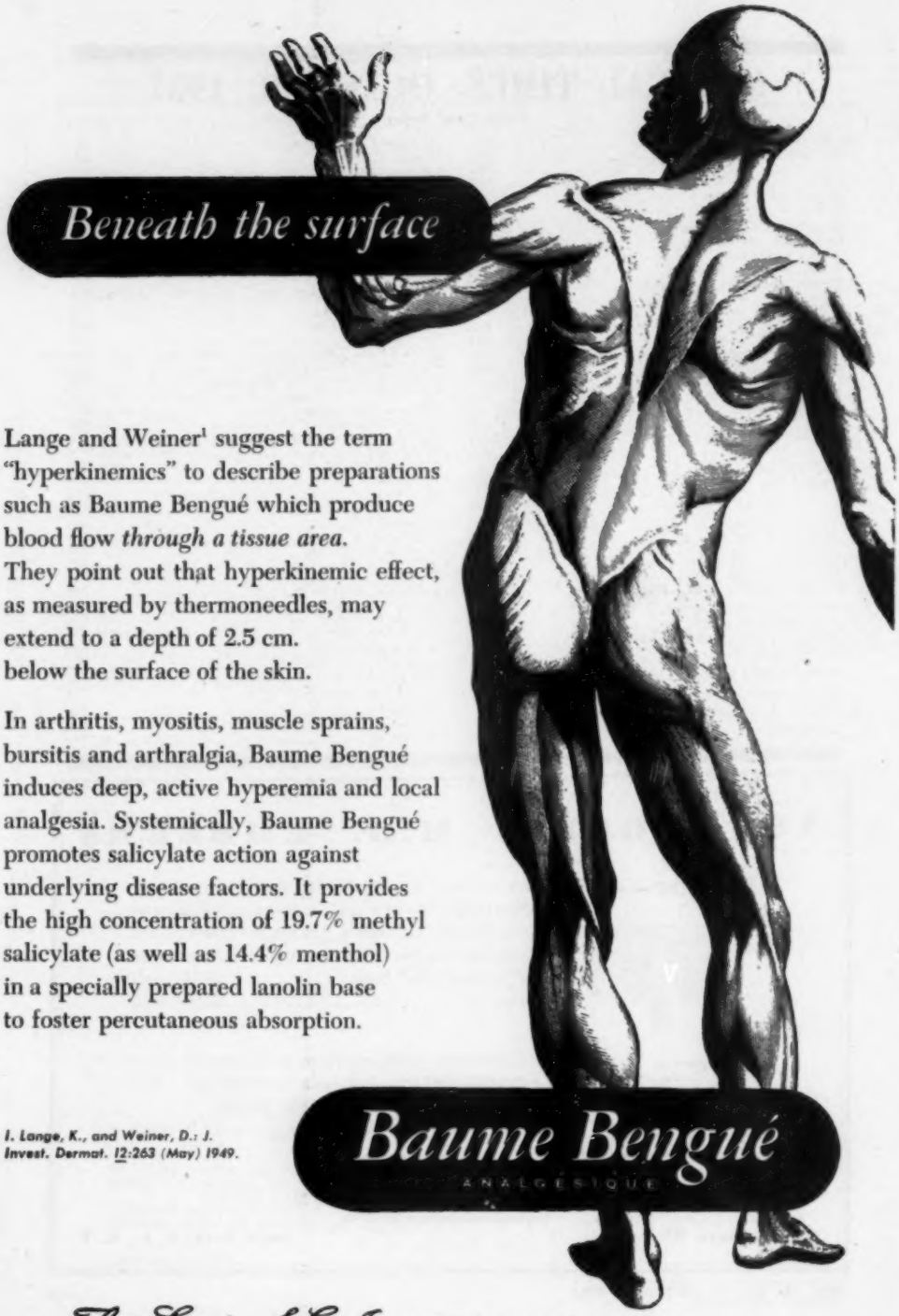
TO SHARE

FULLY equipped office in professional bldg. and hospital available every morning and afternoon. Call Yonkers 3-7797 or write Box 10S4, Medical Times.

OPPORTUNITY for neurologist, ophthalmologist or psychiatrist to share new modern office of established general practitioner. Rent reasonable. All conveniences supplied. Telephone Union 7-7790. Office location at 9245 Hudson Blvd., North Bergen, New Jersey. (Near Nungesser and bus terminals.) Box 9S3, Medical Times.

MEDICAL TIMES, OCTOBER, 1951

Advertisers' Index



Lange and Weiner[1] suggest the term "hyperkinemics" to describe preparations such as Baume Bengué which produce blood flow *through a tissue area.* They point out that hyperkinemic effect, as measured by thermoneedles, may extend to a depth of 2.5 cm. below the surface of the skin.

In arthritis, myositis, muscle sprains, bursitis and arthralgia, Baume Bengué induces deep, active hyperemia and local analgesia. Systemically, Baume Bengué promotes salicylate action against underlying disease factors. It provides the high concentration of 19.7% methyl salicylate (as well as 14.4% menthol) in a specially prepared lanolin base to foster percutaneous absorption.

1. Lange, K., and Weiner, D.: J. Invest. Dermat. 12:263 (May) 1949.

Thos. Leeming & Co. Inc. 155 East 44th Street, New York 17, N.Y.

in TRICHOMONIASIS

ARGYPULVIS provides SUSTAINED THERAPY FOR BETTER CONTROL

● The same preferred powder form for office insufflation and for supplemental home use . . . an unbroken chain to establish prolonged therapy under more controlled conditions. Use coupon below for literature and professional samples.

Reich, Button and Nechtow*

ARGYPULVIS

ARGYROL and ARGYPULVIS are registered trademarks, the property of

A. C. BARNES COMPANY
NEW BRUNSWICK, N. J.

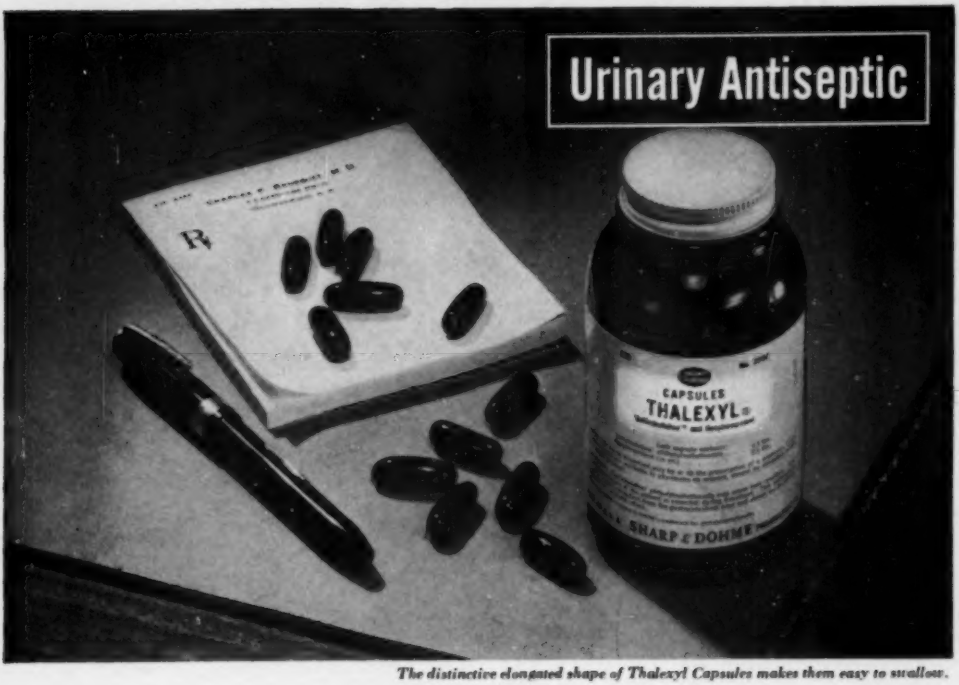
INTRODUCTORY OFFER TO PHYSICIANS: *On request we will send professional samples of ARGYPULVIS (both forms), together with a reprint of the Reich, Button and Nechtow report. (Use coupon.)

A. C. Barnes Company
Dept. MT-101, New Brunswick, N. J.

Name .....

Address .....

City ..... State .....



The distinctive elongated shape of Thalexyl Capsules makes them easy to swallow.

Simultaneous use of Sulfathalidine® and Hexylresorcinol recommended for thorough treatment of

COMMON URINARY-TRACT INFECTIONS

Clear, sparkling urine is usually obtained within one week.

THALEXYL® Capsules contain *Sulfathalidine®* and *hexylresorcinol* in a single dosage form—provide bacteriostatic and analgesic actions for control of infection and relief of symptoms in acute and chronic *cystitis, pyelitis,* and *ureteritis.*

Symptoms are usually brought under control promptly: Pain, burning, and tenesmus are relieved. Especially gratifying is the release from the frequent urge to urinate which, before treatment, is sometimes so troublesome as to wake patients several times during the night.

THALEXYL is effective against *Escherichia coli* and various cocci. It usually renders urine sterile within one week, but medication should be continued for a total of three weeks to ensure against recurrence of infection.

Recommended dose for adults: 4 capsules three times a day (total daily dose of Sulfathalidine: 6.0 Gm.; of hexylresorcinol: 1.2 Gm.).

Recommended dose for children 6 to 12 years of age: 3 capsules three times a day (total daily dose of Sulfathalidine: 4.5 Gm.; of hexylresorcinol: 0.9 Gm.).

Capsules should be taken after each meal to avoid the possibility of gastric irritation; they should be swallowed whole with water. Fluid intake should be restricted, and diuretics should be avoided during treatment. Sharp & Dohme, Philadelphia 1, Pa.

THALEXYL®

Capsules Sulfathalidine® and Hexylresorcinol